

FY 2020–2026 U.S. DEPARTMENT OF VETERANS AFFAIRS ENTERPRISE ROADMAP EXECUTIVE SUMMARY

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Purpose – VA Enterprise Roadmap

- The U.S. Department of Veterans Affairs' (VA) information technology (IT) modernization plan that provides visibility into Department's digital transformation journey, where it must go, and how it will get there
- Describes VA's current and future views of its business and technology environment
- Illustrates VA transformative initiatives and IT modernization timelines
- Demonstrates how IT will improve customer experience (CX), care coordination, access to benefits, interoperability, trust in VA, and stewardship of taxpayer dollars
- Informs long-term IT planning, prioritization, budgeting, and decision making across VA
- Addresses oversight concerns that VA lacks an IT modernization plan
- Supports the development of System, Product, and Portfolio Architecture
- Aligns to the Office of Management and Budget (OMB) Memorandum 13-09 and Circular A-11, President's
 Management Agenda (PMA), VA Priorities, VA Strategic Plan, VA Business Reference Model, Veterans Health
 Administration (VHA) Health Information Strategic Plan, VA's IT Information Resources Management (IRM) Strategic
 Plan, Office of Information and Technology (OIT) Digital Transformation Strategy, Joint Business Plans, and OIT
 Division Operations Plans
- VA's Chief Information Officer (CIO), supported by the Office of Quality, Performance, and Risk (QPR), is responsible
 for the maturation of VA's Enterprise Roadmap

For more information on near and short-terms plans for System, Product, and Portfolio Architecture, refer to VA's Architecture and Engineering Service within the Demand Management Division of the Enterprise Program Management Office.

Structure - VA Enterprise Roadmap Executive Summary

The Executive Summary provides a detailed overview of the content within the Enterprise Roadmap:

- Organized to align with OIT's Development Security Operations (DevSecOps) Product Line Management (PLM) Model
- Depicts the modernization of 25 Product Lines that drive care, benefits, and services within five PLM Portfolios
- QPR will incorporate Data Analytics/Knowledge Management and End User Operations into the Enterprise Roadmap once OIT institutionalizes these Product Lines
- QPR will evolve the Enterprise Roadmap as OIT refines the PLM Model and implements Technology Business Management (TBM)

To provide insight into each Portfolio, the next sections of the Executive Summary will follow the structure below.

- A Portfolio Overview slide that provides a narrative summary of the respective Portfolio
- A summary of each Product Line within the Veteran Experience Services, Health Services, Benefits and Memorial Services, Corporate Services, and Technology and Platform Services Portfolios, including:
 - Descriptions of the current environment, drivers, key transformative initiatives, and future environment
 - Milestones that document transformative initiatives and decommissioning timelines
 - Architecture diagrams and graphics (if available)

The Enterprise Roadmap was developed in collaboration with OIT's Account Management Office; Enterprise Program Management Office; IT Operations and Services; Office of Technical Integration; Office of Information Security; Office of Strategic Sourcing; and Office of Quality, Performance, and Risk as well as the Board of Veterans' Appeals; Office of Business Process Integration; Office of Research and Development; Veterans Experience Office; and Office of Human Resources and Administration.

OIT Product Line Management Model

Portfolio	Product Line	VA Priority	OIT Strategic Goal	VA Priority Initiative(s)	PMA CAP Goal(s)
⇔	Digital Experience	Customer Service	Goal 1: Deliver Exceptional Customer Experience	Navigator	1, 2, 4
Veteran	Contact Center	Customer Service	Goal 1: Deliver Exceptional Customer Experience	Navigator	1, 2, 4, 5
Experience Services	Eligibility and Enrollment	Customer Service	Goal 1: Deliver Exceptional Customer Experience	IT Modernization	1
Services	Customer Master Data Management	Customer Service	Goal 1: Deliver Exceptional Customer Experience	IT Modernization	1
	Medical Care	Electronic Health Record	Goal 5: Achieve seamless & secure data interoperability across VA, DoD & Partners	• EHRM	1, 2, 4
Health Services	Health Care Administration	MISSION Act	Goal 2: Drive IT and VA capability modernization through digital transformation	Mental Health	2, 4
	Telehealth and Scheduling	MISSION Act	Goal 2: Drive IT and VA capability modernization through digital transformation	Telehealth Modernization	1, 2, 4
	Medical Research, Education, and Population Health	Electronic Health Record	Goal 5: Achieve seamless & secure data interoperability across VA, DoD & Partners	• EHRM	1, 2, 4
	Community Care	MISSION Act	Goal 2: Drive IT and VA capability modernization through digital transformation	VA Choice	1, 4, 9
	Supply Chain Management	Business Systems Transformation	Goal 3: Transform procurement and acquisition processes	Supply Chain Modernization	1, 2, 7, 11
	Education and Veteran Readiness and Employment	Business System Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• GI Bill	1, 2, 4, 9
	Compensation and Pension	Business System Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• GI Bill	1, 2, 4, 9
m 9	Loan Guaranty	Business System Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• GI Bill	1, 2, 4, 9
Benefits and	Insurance	Business System Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• GI Bill	1, 2, 4, 9
Memorial Services	Appeals	Business System Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• GI Bill	1, 2, 4, 9
	Benefits Integration and Administration	Business System Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• GI Bill	1, 2, 4, 9
	Memorial Benefits and Services	Business Systems Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	IT Modernization	1,4

OIT Product Line Management Model (continued)

Portfolio	Product Line	VA Priority	OIT Strategic Goal	VA Priority Initiative(s)	PMA CAP Goal(s)
	Acquisition and Property Management	Business Systems Transformation	Goal 3: Transform procurement and acquisition processes	Supply Chain Modernization	1, 2, 7, 11
Corporate	Financial Management	Business Systems Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	• FMBT	1, 5, 7, 9, 10, 11, 12
Corporate Services	Human Capital Management	Business System Transformation	Goal 4: Inspire a culture of digital transformation, IT modernization, and customer service	HR Modernization	1, 3, 4, 5, 6, 13
	SecVA/Congressional/Legal Affairs	Business Systems Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	IT Modernization	1, 2, 4, 5
	IT Infrastructure Operations and Services	Business Systems Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	IT Modernization	1
	Data Analytics and Knowledge Management	Business Systems Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	Stop Fraud, Waste and Abuse	2, 4, 9, 14
Technology and Platform Services	Cyber Security and Access Control Services	Customer Service	Goal 2: Drive IT and VA capability modernization through digital transformation	• IT Modernization	1
Services	Trusted Information Sharing	Customer Service	Goal 5: Achieve seamless & secure data interoperability across VA, DoD & Partners	IT Modernization	1, 2, 4
/	Platform Management	Business Systems Transformation	Goal 2: Drive IT and VA capability modernization through digital transformation	IT Modernization	1
/	End User Operations	Customer Service	Goal 1: Deliver Exceptional Customer Service	IT Modernization	1



Veteran Experience Services Portfolio Overview

Current Environment

Drivers

Transformative Initiatives

Future Environment

The Veteran Experience Services Portfolio *supports VA in improving CX* as Veterans, family members, and caregivers navigate the journey from military service through the spectrum of VA services.

Veterans often have a fragmented and inconsistent experience when interacting with VA's contact centers or digital content, and the Department lacks a standardized method to verify Veteran status or link Veterans with their existing information at VA when they apply for services.

VA is committed to creating an interactive experience with the Veteran that is consistent, easy, intuitive, and personalized. This includes modernizing its digital tools and consolidating, integrating, and sharing data across the Department.

VA provides services to 10 million Veterans, survivors, family members, caregivers, and personal representatives, and over 10 million people access its digital tools and content each month.

Disparate technology, siloed data, and unstandardized processes contribute to a variable and disjointed CX. This makes it difficult for users to find and navigate VA's digital tools and content, inhibits VA from tracking a single engagement record for a Veteran, and results in frequent and multiple requests for Veterans to prove their identity and status.

The PMA and 21st Century Integrated Digital Experience Act (21st Century IDEA) further call for a world-class, Veteran-centric CX. VA is also serving as the lead agency for PMA Cross-Agency Priority (CAP) Goal 4 (Improving Customer Experience).

- Veteran-Facing Services/VA.gov
- VA Online Scheduling (VAOS)
- Enterprise Contact Center Modernization (ECCM)
- White House VA Hotline
- Veterans Signals (VSignals)
- Enrollment System Modernization (ESM)
- VA Data Access Modernization
- VA Profile

The Department will deliver seamless and personalized experiences for Veterans and customers across all digital services and communication channels. It will provide a unified, consistent experience that benefits Veterans regardless of how they interact with VA.

VA will streamline and modernize its digital experience to put the Department at the leading edge of digital modernization across government. An authoritative data source (ADS) will also provide accurate and consistent customer profile data that is easily and reliably accessible.

The Department will be able to focus entirely on the customer's experience—regardless of the nature of the service it is providing—and build long-term relationships as part of a holistic approach that treats Veterans, not just their conditions.



Veteran Experience Services: Digital Experience

Current Environment

Drivers

Future Environment

Whether it is shopping for car insurance, changing a mobile phone plan, or scheduling a dentist appointment, Americans increasingly expect the places where they do business to offer easy-to-use digital tools for routine transactions.

Veterans, caregivers, Servicemembers, Veterans Service Organizations (VSOs), and any of VA's users are no different; they expect an online experience on par with the private sector companies that they interact with in their day-today lives.

Rather than deliver digital tools and content in stovepipes offered under competing brands with different logins, VA is working to modernize and consolidate digital tools into an enterprise-wide self-service platform accessible from a single place: VA.gov.

VA's Digital Modernization Strategy was developed with input from experts across VA and approved by senior leadership, and it focuses on an enterprise-wide approach to transforming and modernizing VA's digital experience.

Over 10 million people access VA's digital tools and content each month.

These users have a challenging time finding tools and services, experience disjointed navigation between sites, and think the user experience is focused more on the Administrations than it is on the users.

The **21st Century IDEA** further solidifies the goal of creating a citizenfriendly digital experience. The legislation requires public-facing agency websites to have a consistent design and to be compliant with web standards developed by the U.S. **General Services Administration** (GSA).

Additionally, the Foundations for Evidence-Based Policymaking (FEBP) Act of 2018 requires all federal agencies to designate a chief data officer, maintain comprehensive data catalogs, and ensure that all nonsensitive government data is available in machine-readable formats by default.

PMA CAP Goal 4 (Improving Customer Experience) and the Secretary of Veterans Affairs' focus on CX are also major forces driving the improvements to VA's digital experience.

Veteran-Facing Services/VA.gov: Modernizing and consolidating various digital tools into an enterprise-wide self-service platform accessible from a single place: VA.gov, which now serves as the single front door to VA

Transformative Initiatives

- VA Online Scheduling (VAOS): Integrating VAOS into VA.gov as a part of the integrated health tools, enabling Veterans to self-schedule, request, and cancel appointments; view appointment details; send related messages; and receive notifications and reminders
- Facility Locator/Community Care **Refresh:** Improving Veterans' experience when searching for and selecting a facility by resolving usability, accessibility, and data quality issues; refining data analytics capabilities; and aligning VA and community care service names with Veteran-facing language
- Single Sign-On: Creating a unified login and authentication experience that provides secure access to products and tools built on different platforms

Through the relaunch of VA.gov, the Department is demonstrating that it is possible to transform its online experience.

With over 100,000 pages of content on VA.gov, the Digital Modernization Council and Web Brand Consolidation group will continue to *streamline VA's* digital experience so it is more userfriendly for customers and more efficient for VA. The Department will consider using artificial intelligence (AI) to suggest possible areas of interest to users based on personal preferences.

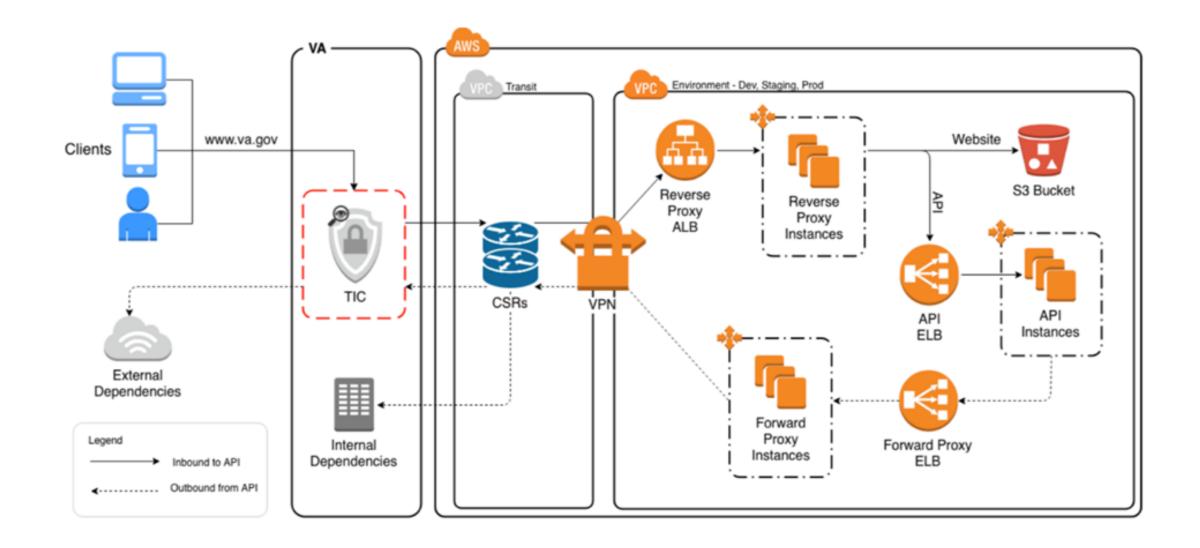
VA will develop a modern experience for Veterans—one that will put the Department at the leading edge of digital modernization across government.

It will deliver *self-service tools on par* with top private sector companies and have the best online experience in the Federal Government. VA's Digital Modernization Vision will ensure that the Department will customize every digital service to the individual using it.

>> Unfunded/ Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Decommission Explore.VA.gov	Q1: Deploy Integrated My Health Dashboard minimum viable product	Q3: Ex pand mobile services and videoconferencing capabilities to support suicide prevention programs and mental health care in rural areas	Q3: Ex pand mobile services and videoconferencing capabilities to support suicide prevention programs and mental health care in rural areas	Q4: Implement AI to detect patterns in data and provide actionable insight that improves CX	Q2: Complete DD Form 214 Process Integration	Q4: Update VA.gov to respond to 5G technology
Q1: Migrate to Drupal Content Management System	Q2: Deploy Dashboard 2.0 on VA.gov	Q3: Ex pand integration and APIs with Benefits Integration Platform (BIP)	Q3: Ex pand integration and APIs with BIP	Q4: Initiate integration with DoD's electronic version of the DD Form 214 Process	C4: Implement intelligent software to create agile infrastructure that automates software and service updates to respond to evolving business needs	Q3: Ex pand AI to other services on VA.gov platform
Q2: Complete Benefits and Appeals Modernization	Q2: Rebuild eBenefits Tools and Features in VA.gov	Q4: Implement Tier 3 content and navigation	Q4: Deploy Digital Experience enhancements based on VA Priorities, user research, and customer feedback	Q4: Deploy Digital Experience enhancements based on VA Priorities, user research, and customer feedback	Q4: Deploy Digital Experience enhancements based on VA Priorities, user research, and customer feedback	Q4: Deploy Digital Ex perience enhancements based on VA Priorities, user research, and customer feedback
Q2: Support implementation of MISSION Act Phase III	Q4: Decommission eBenefits	Q4: Implement Vet Center, Regional Offices, and NCA Redesign				
Q2: Launch consolidated Online Scheduling on VA.gov	Q4: Implement Tier 2 content and navigation	Q4: Deploy Digital Ex perience enhancements based on VA Priorities, user research, and customer feedback				
Q3: Deploy Profile 2.0 on VA.gov	Q4: Ex pand VAMC Redesign across all facilities					
Q4: Deploy Facility Location 2.0	Q4: Deploy Digital Experience enhancements based on VA Priorities, user research, and customer feedback					
Q4: Deploy Digital Transition Assistance Tools	Q4: Integrate Cemer EHR into Patient Portal on VA.gov				VISION:	tal Evneriones
Q4: Deploy Caregiver Application on VA.gov					The completion of Digi milestones will enable Department's digital er	VA to streamline the nvironment so it is more
Q4: Enhance data mining and predictive analytics capabilities throughout VA.gov					efficient and user-frien improves Veteran exp	dly for customers and

VA.gov Topology Basics





Veteran Experience Services: Contact Center

Current Environment

VA provides a wide range of services to 10 million Veterans, survivors, family members, caregivers, and personal representatives, and during the delivery of these services, the **Department receives 140** million calls annually. VA also uses various customer relationship management (CRM) technologies to effectively communicate with the population that it serves.

Veterans expect VA to offer intuitive CX, self-service options for routine transactions, and exemplary customer service. However, VA currently *lacks an omnichannel* operating model that is coordinated across the enterprise. Therefore, Veterans often have fraamented and variable encounters with contact centers that include unanswered phone calls, long wait times, and overwhelming written materials. Additionally, VA Medical Centers (VAMCs) and other VA facilities use differing CRM technologies, which has led to a proliferation of non-standardized tools and inconsistent CX.

This prevents VA from providing a seamless Veteran experience that meets industry standards. The Department is committed to creating an interactive experience with the Veteran that is consistent, easy, intuitive, and personalized. Therefore, it is planning to transition all of its contact centers and associated CRM and knowledge management (KM) tools to a single enterprise application.

Drivers

VA's contact centers are the door to a complex environment that Veterans must **navigate** when contacting the Department. They are implemented by each Administration and regionally through VAMCs. This results in over 1,800 VA contact centers that have varying levels of maturity. Each one operates in an independent, unstandardized manner with fragmented equipment, technologies, and processes. This creates multiple redundancies, inefficient operations, and an inconsistent CX.

VA's use of disparate CRM technology also results in inconsistent Veteran experience and inhibits its ability to track a single engagement record. The **Department must** develop a CRM strategy and implement a unified platform in order to address these issues and provide excellent customer service. VA is currently working with the White House, OMB, and GSA to support a government-wide center of excellence that is dedicated to call centers, which will assist in considering a unified CRM strategy for enterprise-wide deployment.

Additionally, the PMA and 21st Century IDEA are driving contact center and CRM transformation. VA is serving as the lead agency for PMA CAP Goal 4, advising 14 other federal agencies in achieving improved CX, and the 21st Century IDEA is placing the focus on agency CIOs to more broadly assume the leadership role for CX.

Transformative Initiatives

- **Enterprise Contact Center Modernization (ECCM)**: Consolidating the existing network of contact centers into an enterprise-wide Veteran Contact Center through a unified CRM and KM platform and technology
- Virtual Care in VHA Clinical Contact **Centers**: Transforming hundreds of fragmented and antiquated call centers into modern, regional/VISN virtual care centers to achieve clinically meaningful first-contact resolution via omnichannel virtual triage
- White House VA Hotline: 24/7 crisis line for at-risk Veterans that interfaces with the Master Veteran Index (MVI) and will deliver additional reporting capabilities, self-service for Veterans, and enhanced call center capabilities
- CRM/Unified Desktop Optimization (UD-O): Deploying expanded CRM functionality to Veterans Benefits Administration (VBA) call agents to allow them to quickly and accurately respond to Veterans' inquiries and enable integrated access to customer service centers
- Veterans Signals (VSignals): A customer experience management tool that empowers Veterans, eligible dependents, caregivers, survivors, VA employees, VSO members, and community leaders to provide near real-time feedback for services and benefits provided by VA

Future Environment

By breaking down institutionalized silos and transforming the Department's approach to customer service. VA will deliver seamless and personalized experiences for all Veterans across every touchpoint and channel.

Contact center modernization will **deliver a** unified experience that is consistent and benefits Veterans regardless of how they choose to interact with VA. It will use a Veteran-centric omnichannel operatina model in order to decrease complexity and provide ease of access for Veterans. VA will create a "post channel" world in which multiple forms of interaction or omnichannel engagement blend to create the best CX.

The Department will provide a modern, streamlined, and responsive CX for those who contact VA contact centers. It will improve the level of care available to Veterans by eliminating and unifying facilities and technology stacks and standardizing processes. It will also define and implement a unified CRM strategy built on an integrated commercial platform in order to improve access to VA through stateof-the-art CRM and self-service tools.

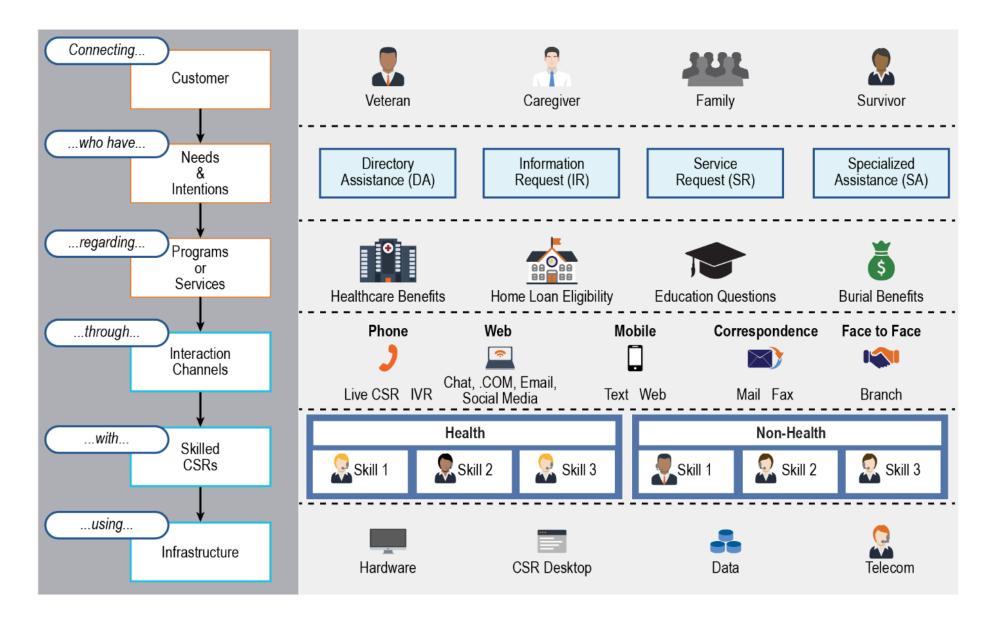
Using an enterprise CRM platform, VA will gather data and communicate with Veterans through the channel of their preference. The enterprise-wide CRM solution will allow VA to proactively deliver the right care to the right Veterans at the right time.

F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024		FY 2025	FY 2026	
Q1: Complete VAM upgrade and ex pansion	Q1: Integrate Members Services VBMS with HEC				>>	Q1: Complete ECCM		
Q1: Deploy VASS minimum viable product	Q1: Deploy enhancements for Member Services Call Centers							
Q1: Complete CommCare C3 Ex pansion and Optimization IOC	Q1: Incorporate Mobile Applications into VSignals							
Q1: Deploy Community Signals	Q1: Incorporate VR&E feedback channel into VSignals							
Q1: Deliver Member Services FP and CPAC minimum viable product	Q1: Incorporate Community Care feedback channel into VSignals							
Q1: Deploy UD-O Enhancements	Q1: Incorporate IC3 feedback channel into VSignals							
Q2: ECCM Phase 1: Integrate VA Profile with Contact Centers	Q1: Incorporate ORM feedback channel into VSignals							
Q2: Deploy VASS Phase 2 to enable system automation/agent interaction	Q1: Incorporate HR&A feedback channel into VSignals							
Q2: Complete CRM/UD-O usability enhancements	Q2: Implement ECCM Phase 2 Tier 1							
Q2: Deploy Member Services CRM to FP/CPAC & deploy HEC-CRM	Q2: Incorporate OPIA feedback channel into VSignals							
Q2: Deploy PATS-R Nationwide	Q2: Incorporate INS feedback channel into VSignals							
Q2: Incorporate Emergency Medicine, Inpatient, & Appeals feedback channels into VSignals	Q3: Incorporate LGY feedback channel into VSignals							
Q3: Deploy VASS post minimum viable product and IVR	Q3: Incorporate FSC feedback channel into VSignals					VISION: The completion of Co	ontact Center milestones	
Q3: Integrate CRM Applications with VA Veteran Profile	Q4: Incorporate Fiduciary feedback channel into VSignals					will enable the transforment's curren	ormation of the tapproach to customer	
Q3:Member Services HRC FP/CPAC Go Live and HEC-CRM Go Live	Q4: Incorporate TED feedback channel into VSignals						ences for Veterans across	
Q3:Implement ECCM Phase 1 Tier 1						every touchpoint and	d channel.	
Q4: Integrate CommCare PATS-R, VSignals, CPRS/VA Profile								

ECCM Veteran-Centric Operating Model





Veteran Experience Services: Eligibility and Enrollment

Current Environment

Drivers

Transformative Initiatives

Future Environment

The Enrollment System (ES) is the entry point for all Veterans needing health care within VA or through community care. ES compiles military service, demographics, and financial data from VA health care facilities and other internal and external authoritative sources to process Veterans' applications for enrollment and support benefits determinations in an automated fashion. Once compiled, ES shares this information with the VA health care facilities treating the Veteran.

The initial release of ES provided the foundation for future capabilities that are vital for consolidating health benefits eligibility determinations for all VA programs, reducing Veteran and administrative staff burdens, enhancing enrollment services to make it easier for Veterans and beneficiaries to access benefits, and providing self-service opportunities for Veterans and beneficiaries.

Current risks and issues for ES include managing dependencies with the development schedules of other VA systems, obtaining the necessary funding to support ongoing development efforts, and carrying system technical debt, which has accrued over the past 10 years while ES has been in production.

Main drivers for the Eligibility and Enrollment Product Line include the Fiscal Year (FY) 2018–2024 VA Strategic Plan and the VA Priorities.

Accordingly, the Product Line is focused on customer feedback to make access to eliaibility services as seamless, effective. and efficient as possible; adding functionally that allows VA employees to identify and assign benefits to Veterans affected by the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act; and using systems and technology to enable employees to enhance the quality of the care and services Veterans receive.

VA's shift to a DevSecOps framework is also fundamentally changing the way the Product Line develops and operates.

The Product Line is preparing for the transition by using DevSecOps tools and developing ways to automate development, testing, and release activities. It must develop integrated teams that use DevSecOps pipelines and adopt continuous integration and continuous delivery (CI/CD) as the norm.

Due to the Department's goal to move to the Cloud, Product Line has begun adopting Cloud computing to enable agile product delivery, data sharing, and enhanced security.

- **Enrollment System Modernization** (ESM): ESM focuses on improving the functionalities in ES required to
 - process Veterans' applications for enrollment.
 - manage enrollment correspondence and telephone inquiries,
 - share Veterans' eligibility and enrollment data with VA and non-VA organizations, and
 - support national reporting and analysis of VHA enrollment data.

ESM provides self-service opportunities for Veterans, which allow them to save, submit, and edit health benefit application information online, expediting the enrollment and eligibility process. It will also enable VA to comply with MISSION Act legislation to include enhancing ES in order to comply with grandfathered status eligibility requirements.

Through ESM, the Eligibility and Enrollment Product Line will provide more efficient and effective eligibility and enrollment decisions and reduce delays to services for Veterans.

As ESM progresses, OIT will migrate ES to the Azure Cloud environment. The Cloud migration will allow for improved enterprise functionality with automated expansion and compression of processing capability based on system demand.

In addition, as the Product Line transitions its software development methodology from the Veteran-focused Integration Process (VIP), DevSecOps will allow for continuous development and releases multiple times per day as needed to support the production release of functionality.

The change to DevSecOps will reduce the risk associated with software defects in planned production releases and the time required to go from user stories and requirements to the release of functionality in production. Major benefits will include faster deployment times, improved quality, and reduced costs associated with software development for eligibility and enrollment services.

ELIGIBILITY AND ENROLLMENT MILESTONES*

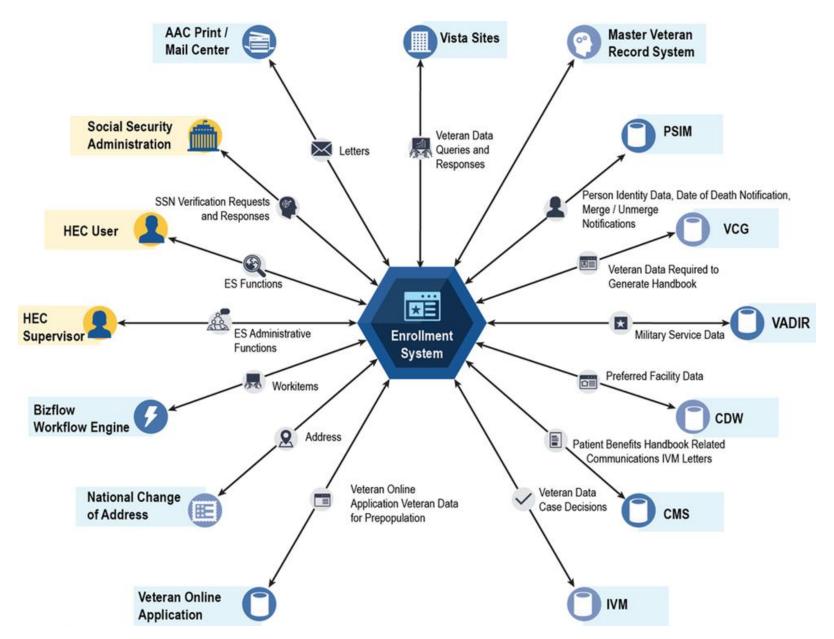
F Y 2020-F Y 2026

Funded

>>> Unfunded/
Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Complete ESM MISSION Act Next Phase	Q1: Deploy EHRM Eligibility and Enrollment Functionality releases	Q1: Deploy EHRM Eligibility and Enrollment Functionality releases				
Q1: Deploy ESM Suicide High-Risk Patient Enhancements	Q2: Migrate Eligibility and Enrollment Production to VAEC	Q2: Award Eligibility and Enrollment Development Contract				
Q1: Deploy ESM Core Veteran Medical Benefit Plans	Q3: Implement Automated Testing Tools					
Q1: Deploy ESM Urgent Care	Q3: Deploy final production release of ODM Rules Engine					
Q1: Integrate ES with VA Customer Profile to ensure accuracy of residential address locations						
Q1: Integrate ES with Cemer						
Q2: Migrate ES to VAEC						
Q2: Deploy ESM Camp Lejeune Veteran functionality						
Q3: Decouple registration from ES and move to Cemer to provide VA-wide process						
Q4: Deploy Caregivers Functionality Phase 2 to incorporate other eligibility processes for non-Veterans					VISION:	
Q4: Initiate decommissioning of VistA REE modules					The completion of milestones will pro	Eligibility and Enrollment ovide Veterans with self-time with the will enable VA to make
					more efficient and	effective eligibility and ns and reduce delays to

The Enrollment System





Truth."

Veteran Experience Services: Customer Master Data Management

Current Environment

Across VA and beyond, providing services Currently, a Veteran who applies for a VA to Veterans requires determining who benefit or service is frequently asked to they are, confirming military service prove his or her identity and Veteran information, and comprehensively linking status by producing a DD-214 or other program records from across the evidence, even if VA already has a record of the person's service. Depending on the Department. Yet, there is not currently a single, simple, centralized method to sequence in which Veterans apply for reliably and accurately verify the Veteran benefits, they may even be asked to prove their status to VA multiple times despite status of a given individual or link an individual with all the information VA having already done so before.

may have about that person. Additionally, Veteran studies have shown Existing identity databases are that VA's key customers are frustrated and confused by the lack of uniformity of incomplete, difficult to integrate with, and funded under a pay-to-play model. their basic common data across the This leads business lines to execute their **Department**. Due to multiple sources and own individual identity checks and add the lack of a standard process for verifying addresses, VA struggles to reconcile and records via non-standard methods. Different VA components do not trust maintain accurate mailing addresses for authoritative sources and regularly check Veterans. Erroneous mailing address data different databases in different ways, results in the Department sending leading Veterans to be accurately prescriptions and other health care related identified for receipt of some services but correspondence to incorrect addresses. not for others.

Managing data at an enterprise level VA's multi-channel strategy depends on an reduces IT development lifecycles; lowers project failure rates; enables enterprise infrastructure built on effective management of customer data and the applications; and provides analytics and delivery of an authoritative 360-degree cross-unit data/information for decision view of its customers, spanning from *making*. The most critical dependency for military service to discharge to Veteran Customer Master Data Management is the successful partnership of the Veterans status. The centerpiece for VA Customer Data is VA Profile, which provides this Experience Office (VEO), businesses, and 360-degree view and is being designed for OIT in communicating and collaborating enterprise-wide use as "One Source of effectively to deliver these critical data management services.

Drivers

Transformative Initiatives

Future Environment

VA Data Access Modernization: Establishing VA Profile as a comprehensive customer profile to ensure that all data consumers can quickly and easily access up-to-date, authoritative administrative data on Veterans

- VA Identity and Military History Data Strategy: Improving the comprehensiveness and integrity of VA's identity and military service data so that relevant data sources contain all known Veterans and military service records
- VA Profile: An enterprise-wide ADS to establish, maintain, and synchronize Veteran, Guardian, and Associated Individual customer profile data and a centralized place for VA systems to access this information
- Customer Experience Data Warehouse (CxDW): Consolidating customer data and metrics from across the agency into a single usable database so that a complete picture of a Veteran's journey can be formed
- **Veterans Information Solution/VA** DoD Identity Repository (VIS/VADIR): Enabling bi-directional sharing of information between the U.S. Department of Defense (DoD) and VA to improve automation and processing efficiencies

Veterans will provide their data to VA just once rather than repeatedly for different services, and in many cases, Servicemembers' data will be automatically available prior to engaging with VA. Internal teams will know where to find authoritative data when building applications and will be able to easily and reliably access that data.

The Cerner Electronic Health Record (EHR) will have a single authoritative source for VA and DoD administrative patient data, and a thriving ecosystem of private sector innovators will deliver world-class services to Veterans and other VA customers securely using VA data.

Additionally, VA Profile will build the foundation for VA's enterprise master data management solution and streamline data collection and dissemination to ensure that there is accurate and consistent information in a central repository.

As a result of the initiative. **Veterans will** have the ability to update information as well as a comprehensive view of their Master Records. At full operating capability (FOC), VA Profile will have governance, data, services, tools, processes, and technology that VA can reliably use for customer service activities, operations, and data profiling.

CUSTOMER MASTER DATA MANAGEMENT MILESTONES*

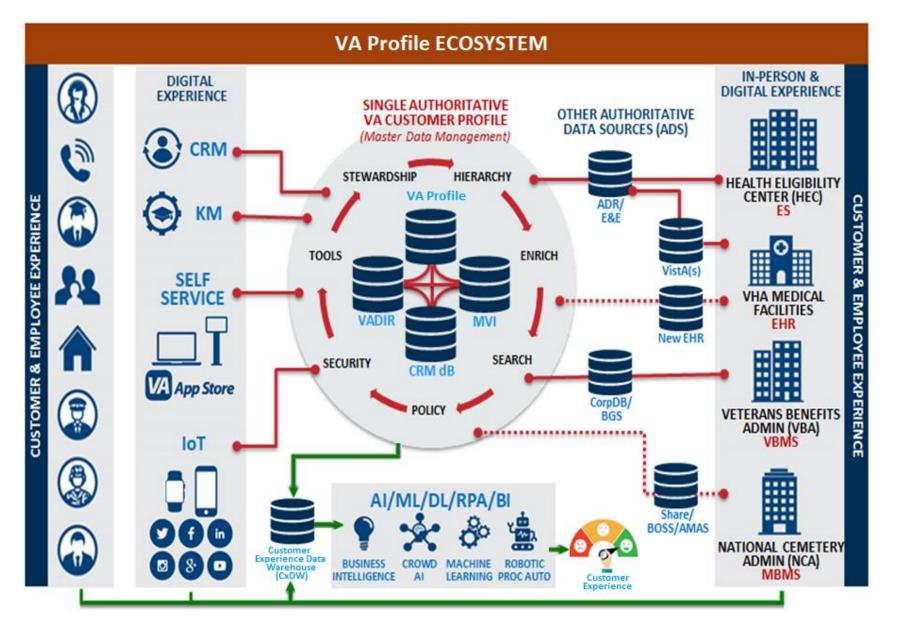
F Y 2020-F Y 2026

Funded

>>> Unfunded/
Pre-decisional

EV 2000	EVICACA		-V 0000	EV 2002		EV 0004	EVOCA		EV 0000
FY 2020	FY 2021	F	Y 2022	FY 2023		FY 2024	FY 2025		FY 2026
Q1: Enable VADIR to provide VA Profile with authoritative customer information	Q4: Deploy FOC of original Cx DW requirements set								
Q1: Enhance VADIR to Produce VBA Data File in support of Mental Health Executive Order									
Q1: Complete MSDS Integration with MPI									
Q2: Enhance VA Profile to include HIE, Awards Service, Rating Service, Military Payments									
Q2: Integrate VA Profile with VistA address validation and Cemer App for VBA Rating Data									
Q2: Complete VADIR/VASS Integration									
Q3: Enhance VA Profile to include Fiduciary Contact Information, Compensation and Pension Payment Mailing Address, Fraud Indicator, Veteran Status & Awards									
Q3: Integrate VA Profile with Mobile Apps, e-VA for Contact Information, and DD/EFT for VHA									
Q4: Enhance VA Profile to include Military Service Episode, Military Occupation, Prisoner of War, and Power of Attorney Contact Information							VISION:		
Q4: Integrate VA Profile with VASS/Caregiver Program for Contact Information, Rating, Awards & Military							The completion of Custor Management milestones foundation for VA's enter	will build the prise master d	lata a
Q4: Complete technical analysis and design for support of Cx DW				 	4		management solution that collection and disseminate authoritative central reports.	it streamlines (ion in an	data

VA Profile Ecosystem





Health Services Portfolio Overview

Current Environment

Supporting the VA Priorities, VHA's three priorities are to Restore Trust, Create a Learning Organization, and Modernize Systems. *Modernization is VHA's blueprint to deliver on both sets of priorities to create a VHA that always anticipates and meets the needs of Veterans, its employees, and other beneficiaries.*

To support VHA's aim of becoming a high reliability, clinically integrated, and Veteran-driven organization, improvements are needed in the delivery of services and benefits, diffusion of best practices, and enhanced employee engagement.

VA's goal is to provide Veterans with the care they need at the right time, at the right place, and from the right provider. Accordingly, the Department is modernizing the way it delivers health care to over nine million Veterans by transitioning VHA from legacy IT systems to a modern, commercially focused suite of applications. The Health Services Portfolio provides advanced technology solutions to enable this transition and ensure modern, high-quality, and efficient medical care delivery.

Drivers

VHA has been the subject of several critical assessments that highlight deficiencies in care, customer service, Veteran access, and integrated service delivery between VHA and the community.

Enterprise risks contributing to its organizational deficiencies include lack of reliable data and analysis, inefficient human capital management, and disjointed performance management.

Additionally, legislation such as the MISSION Act and Anywhere to Anywhere (ATA), are fundamentally transforming the way that VA provides care and services to Veterans.

In times of national crisis, such as the current coronavirus pandemic, VA provides services to the nation based on requests from states while being clear that Veterans are first. This is known as VA's Fourth Mission. VA has determined to make 1,500 beds available for the Federal Emergency Management Agency (FEMA) for non-Veteran patients at various VA locations around the country.

Transformative Initiatives

- Electronic Health Record Modernization (EHRM)
- Suicide Prevention Package
- Prescription Drug Monitoring Program (PDMP) Solution
- Centralized Scheduling Solution (CSS)
- Telehealth Modernization
- VA Video Connect (VVC)
- Multi-Cloud Research Environment
- Community Care Modernization
- Community Care Referral and Authorization (CCRA)
- Caregiver Record Management Application (CARMA)
- Defense Medical Logistics Standard Support (DMLSS)

Future Environment

The Health Services Portfolio will provide innovative solutions to support VHA in becoming a high reliability organization and delivering exceptional, coordinated, and connected care for Veteran health and well-being. More specifically, it will modernize care and service delivery by operationalizing the VA Priorities.

VHA's Veteran-centric health modernization initiatives will enhance CX and improve Veterans' trust in VA through consistent and accessible customer interaction channels. By striving to eliminate regulatory barriers, VA will increase Veterans' access to care in their local communities and particularly improve access for those in rural or underserved areas.

Other Health IT systems will provide clinicians, administrators, and patients with the IT tools that are not part of the EHR but are needed to support health care delivery. VHA technology will ultimately align with its structures, processes, and people to deliver new experiences for employees, partners, and Veterans.



Health Services: Medical Care

Current Environment

The Veterans Information Systems and Technology Architecture (VistA) consists of over 170 clinical, financial, and administrative applications. The legacy system supports more than 1,600 VA facilities nationwide as part of the largest integrated delivery network in the U.S. Multiple modernization initiatives to enhance the legacy EHR system have led to more than 130 unique instances of VistA.

Preventing Veteran suicides is VA's highest clinical priority. On average, 20 Veterans, active duty Servicemembers, and non-activated Guard or Reserve members die by suicide each day. Of those 20, 14 were not in VA's care. Therefore, VA is working to improve the transition from active duty to Veteran status, identification of at-risk Veterans, firearm and medication safety, and access to mental health services.

VA offers a wide array of *interventions* designed to identify homeless Veterans, engage them in services, find pathways to permanent housing, and prevent homelessness from occurring. Since 2010, the number of Veterans experiencing homelessness in the U.S. has declined by nearly half.

Drivers

VA pioneered EHR development with VistA. However, after more than 40 years of use, VistA lacks the interoperability with DoD and community care partners needed to better serve Veterans. VistA is extremely costly to maintain as VA's sole health information system and limits the Department's ability to provide Veterans with a seamless care experience.

Congress and government agencies have increased oversight of VA's EHR, interoperability, and data activities (e.g., the MISSION Act and Veterans' Electronic Health Record Modernization Oversight Act).

Additionally, the 2019 Executive Order National Roadmap to Empower Veterans and End Suicide created a task force to develop a roadmap for empowering Veterans to pursue an improved quality of life, preventing suicide, prioritizing related research activities, and strengthening collaboration across the public and private sectors.

Technology advancements—such as open APIs, SMART on Fast Healthcare Interoperability Resources (FHIR) apps, RPA, AI, blockchain, and big data analytics—are shaping the evolution of EHR platforms and future solutions to address Veteran suicide and homelessness.

Transformative Initiatives

- Electronic Health Record
 Modernization (EHRM): Replacing
 VistA with the Cerner EHR, the same
 EHR solution that DoD is deploying,
 and developing a single longitudinal
 clinical health record from active duty
 to Veteran status to ensure
 interoperability with DoD
- Suicide Prevention Package: An enhancement to the Mental Health Assistant (MHA) infrastructure that will enable Veterans to self-report using tablets and kiosk devices
- Prescription Drug Monitoring Program (PDMP) Solution: A modern solution that will enable providers to retrieve controlled substance prescription monitoring data from external sources and within patients' EHRs
- ScripTalk: A modern tool that enables
 VA to generate prescription labels
 that a Veteran can hear, with
 increased memory capacity that
 allows the tool to process and read
 lengthier information and instructions

Future Environment

Full integration of the Cerner EHR will take several years, beginning with the initial operating capability (IOC) sites in October 2020. VA will deploy the Cerner EHR to all VAMCs, clinics, Veterans Centers, mobile units, and ancillary facilities.

Once fully implemented in FY 2027, the Cerner EHR system will be VA's single authoritative source of Veteran health information for patients and providers. It will support improved health outcomes, patient safety, and quality of VA care.

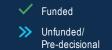
In addition, VHA and VBA will significantly enhance collaboration with DoD and the U.S. Department of Homeland Security (DHS) on mental health and suicide issues through public-private partnerships.

Measurement-based care systems will enable effective screening and assessment of Veteran's suicide risk and better equip health care providers to reduce symptoms and improve recovery through enhanced care.

Finally, VA will comprehensively address opioid safety, pain management transformation, and treatment of opioid use disorder to reduce suicide risks.

MEDICAL CARE MILESTONES*

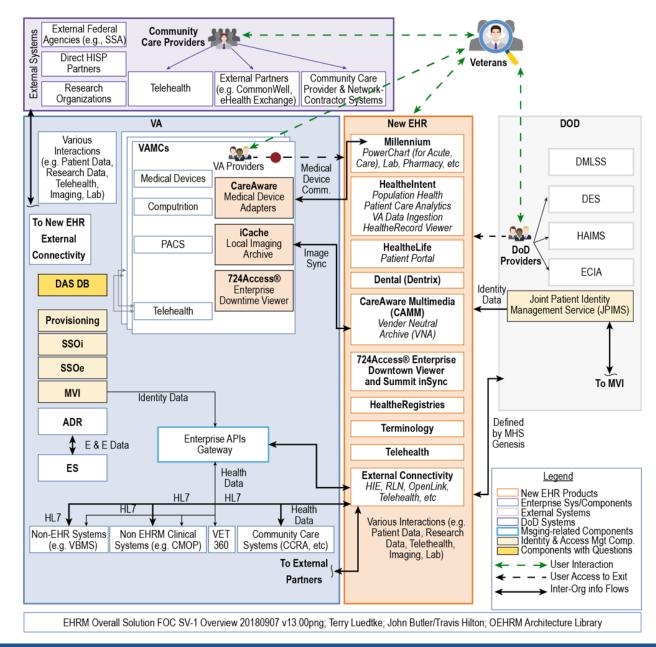
F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Deploy MHA with Kiosk capability Q1: Deploy OTH button in CPRS to	Q1: Initiate deployment of Cemer EHR IOC at Mann-Grandstaff VAMC Q3: Evaluate readiness to	Q4: Deploy Cemer EHR at VAMCs	Q4: Deploy Cemer EHR at VAMCs			
enable clinicians to identify Veterans with this eligibility	release Post COVID Cemer EHR deployment schedule	Q4: Ex pand Mental Health and Suicide Prevention Services	Q4: Ex pand Mental Health and Suicide Prevention Services	Q4: Ex pand Mental Health and Suicide Prevention Services	Q4: Ex pand Mental Health and Suicide Prevention Services	Q4: Ex pand Mental Health and Suicide Prevention Services
Q2: Deploy new National Clozapine Registry functionalities including treatment overrides and blood monitoring forms	Q4: Ex pand Mental health and Suicide Prevention Services					
Q2: Deploy limited production of PDMP solution						
O2: Recode REACH VET to work with Cerner data						
Q3: Deploy clinical reminder for OTH- ex tended eligibility status and enhanced treatment copay algorithm for high-risk Veterans						
Q3: Deploy patient-facing plan and provider-facing assessment tool functionality in MHA Web/Mobile						
Q3: Joint HIE Go-Live						<u> </u>
Q3: Deploy Methadone Dispensing Interface v1.0						
					VISION: The completion of Mee will enable the impleme EHR as VA's single at Veteran health information providers that support outcomes and quality of	entation of the Cerner uthoritative source of ation for patients and s improved health



EHRM Future Environment FOC Overview





Health Services: Health Care Administration

Current Environment

Drivers

Transformative Initiatives

Future Environment

The Health Care Administration Product Line *includes systems, applications, and capabilities that enable the interoperability of Veteran data between non-VA providers and VA,* as well as between VistA and the Cerner EHR to ensure Veterans' EHRs remain current across providers.

Additionally, continuous analysis and business intelligence on comprehensive data sets is being conducted to improve health care for all Veterans.

As VA continues to implement the MISSION Act and transitions from VistA to the Cerner EHR over the next 10 years, VA will need to ensure that each Veteran's EHR is up to date, complete, and not fragmented while multiple EHR systems are in operation at the same time.

The MISSION Act implementation and EHRM influence all facets of Health Care Administration.

- Centralized Scheduling
 Solution (CSS): A software
 component of the Cerner
 EHR implementation that
 will improve access for
 Veterans and streamline
 workflow for staff
- Veteran's Resource-Based
 Appointment Scheduling
 Solution: Evaluating how
 resource-based scheduling
 will work across VHA and
 how telehealth will be
 integrated into that solution

The Health Care Administration products and services will ensure a complete Veteran EHR by integrating Veteran data from non-VA providers and between VistA and Cerner, as VA continues to implement the MISSION Act and transitions from VistA to Cerner over the next 10 years.

VDIF will be key to this. *Data* analytics will be used to improve treatments and Veteran population health care facilitated by the Health Data and Analysis Platform and VDIF.

Additionally, the enhancement and maintenance of administrative capabilities that will not be replaced by Cerner (e.g., Caregivers/CARMA, AudioCare, and Informed Consent) will streamline Health Care Administration processes and procedures.

HEALTH CARE ADMINISTRATION MILESTONES*

F Y 2020-F Y 2026

Funded

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FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025		FY 2026
Q4: CSS Columbus, OH Go-Live	Q1: CHDR integrates with Cerner CSS						
	Q1: EDIS Release of Reengineered Product						
	Q1: EDIS Product migrated to VAEC						
	Q1: PCMM Interfaces with Cemer CSS						
					 VISION: The completion of	Health Care Ad	ministration
					The completion of milestones will ena MISSION Act requestrate improves the completion of the completio	able the implements and da	entation of ata analytics
					treatments, and ou dependents.	are experience tcomes of Veter	rans and



Health Services: Telehealth and Scheduling

Current Environment

VA is a leader in providing telehealth services and leverages technologies to provide care through three primary telehealth modalities: Clinical Video Telehealth, Home Telehealth, and Store and Forward Telehealth. In FY 2019, VA provided more than 2.6 million telehealth episodes of care to more than 900,000 Veterans. VA's patient portal, My HealtheVet, continues to grow, now with more than five million registered users. In FY 2019, there were more than 20.6 million prescription refill

To increase access to telehealth services, VA is implementing the ATA Healthcare Program. Additionally, VA is partnering with Walmart, Philips Healthcare, T-Mobile, Verizon, Veterans of Foreign Wars, and the American Legion to expand its Advancing Telehealth through Local Access Stations (ATLAS) initiative, which allows Veterans who lack the necessary technology in their homes or are unable to easily access a VA facility to receive remote health care at a convenient location.

requests.

Drivers

The Veterans E-Health and
Telemedicine Support (VETS) Act of
2017 provided legislative authority to
ATA, allowing VA clinicians to provide
telehealth services to Veterans
regardless of where they live. Section
151 of the VA MISSION Act authorizes
VA to establish the authority for its
health care providers to deliver care
through telehealth modalities across
state lines, regardless of where a
Veteran is located.

Veteran demographics are evolving, and the increasing trend of women and younger Veterans will also impact future demand. Digitally-savvy Veterans are more comfortable with technology, desire transparency, and have different expectations for their care. These trends will impact and disrupt how VA provides care and services.

In response to the coronavirus pandemic, VHA worked closely with OIT to address and stay ahead of the anticipated increase in demand for virtual care. VA has seen over a 1,200% increase in video visits from home with 10,654 visits in the first week of March 2020 to 139,854 visits in the first full week of July 2020.

Transformative Initiatives

- Telehealth Modernization:
 Processes that facilitate achieving clinically meaningful first-contact resolutions via omnichannel virtual triage, a private sector best practice and critical element of care delivery
- VA Video Connect (VVC): A mobile application that allows Veterans to access VA health care services on their smartphones, tablets, and personal computers and provides a secure, web-enabled video service that makes it easy for Veterans to connect with their VA providers from anywhere in the country
- Telehealth Management Platform (TMP): The foundational application for each VA facility's telehealth program that supports clinical care by simplifying telehealth business processes related to telehealth service agreements, credentialing and privileging, equipment and resource management, clinical and administrative staff point of contact, and scheduling
- Consult Toolbox: A single consult that staff members can forward as needed to schedule a patient for an episode of care

Future Environment

VA will shape the future of health care through telehealth expansion, as telehealth is a critical tool to ensure that the Department delivers convenient, accessible care to Veterans. VA's goal is to provide care through a telehealth modality to 20% of Veterans. The Department's expansion of telehealth will focus on providing care in Veterans' homes or their preferred location.

To enable this expansion, VA will establish a national telehealth network and leverage public-private partnerships. It will expand the availability of telehealth services and improve telehealth modalities through innovative technology to enhance provider productivity, patient experience, and care quality with support for on-demand and resource-based scheduling.

Standardized digital, clinical workflows will provide *improved* and consistent Veteran experience, deeper engagement with patients, and enhanced care coordination—including two-way flow of information between DoD, community care, telehealth, and virtual care modalities.

TELEHEALTH AND SCHEDULING MILESTONES*

F Y 2020-F Y 2026

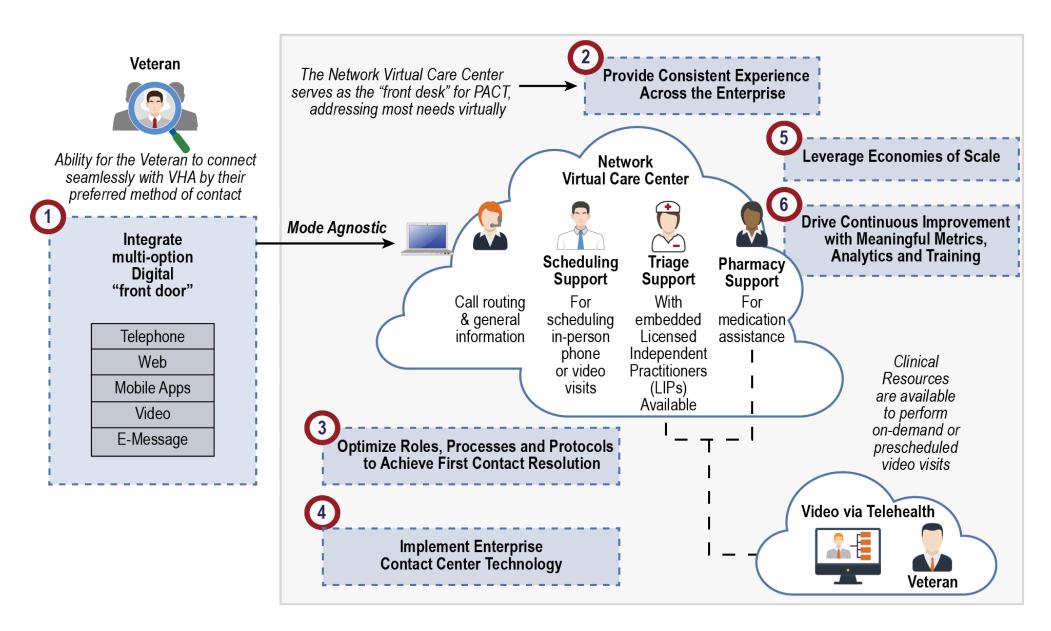
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Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Ex pand telehealth bandwidth ex pansion at additional sites	Q2: Deploy integrated Virtual Care Manager capabilities with modality change and video appointment scheduling in VSE					
Q3: Establish Tele-Urgent Care Hub	Q4: Establish Tele-Specialty Care Hub					
Q4: Integrate full VistA EHR with TMP	Q4: Ex pand VVC capability to 100% of ambulatory care providers					
Q4: Ex pand VVC capability to 100% of primary care and mental health providers	Q4: Deploy provider-based scheduling profile in VSE					
					MSION	
					VISION: The completion of Tele milestones will enable	ehealth and Scheduling medical providers to
					deliver care to Veterar regardless of location a enhance access to ser	and expand and vices that improve
					timeliness of care and	engagement.



Future Environment of VA's Virtual Care Center Model





Health Services: Medical Research, Education, and Population Health

Current Environment

VA uses analytics as one of its tools to

improve health care for Veterans. The

maintains 24 years of data on over 22

Veteran Program (MVP), which has the

Department has one of the largest health

care related data repositories in the world,

the Corporate Data Warehouse (CDW), and

million Veterans. VA also hosts the Million

world's largest gene bank. However, VA's

behind other federal agencies and industry

analytical capabilities have long lagged

counterparts, especially in Cloud

computing.

VA is subject to several regulatory Federal Data Center Consolidation Initiative), Federal Information Security Management Act (FISMA), Federal Information Technology Acquisition and Records Administration (NARA),

The current analytics environment is fragmented and constrained by infrastructure and resource limitations even though the Cloud offers accelerated speed of execution, agility, and lower cost.

VA is frequently unable to control VA research data throughout the data lifecycle (from generating, sharing, and archiving data), and it has had difficulty sharing this information with researchers tasked with developing advanced medical treatments.

VA Research has three primary goals: (1) increase Veterans' access to high-quality clinical trials, (2) increase the substantial real-world impact of VA research, and (3) put VA data to work for Veterans. In order to meet these goals, VA research has developed a research Enterprise Architecture (EA) to improve how it uses data to make real-time, fact-based decisions.

Drivers

compliance standards including Federal CIO quidance (the Cloud Smart policy and Reform Act (FITARA), National Archives Health Insurance Portability and Accountability Act (HIPAA), Privacy Act, and Protections for Human Subjects (45 CFR Part 46).

Additionally, many independent groups audit VA research data including the Office of the Inspector General, Office of Information & Technology, VHA Privacy Office, VHA Office of Research Oversight and others. Audits for control of research data over the entire data lifecycle must be maintained.

VA must invest in analytical tools and train their workforce to better analyze and interpret data, utilizing analytics to improve quality of care. New classes of skilled employees are needed that combine domain expertise, engineering, and statistical expertise.

Managing large amounts of data of different data types, with different sets of provenances and different data ownership/stewardship requirements, influences Medical Research, Education, and Population Health modernization.

Transformative Initiatives

- **VA Informatics and Computing** *Infrastructure (VINCI):* Provides storage and server technologies to securely host national data and provides the necessary systems to allow access to the data along with the tools for reporting and analysis in a secure, virtual working environment
- Genomic Information System for Integrative Science (GenISIS): A highperformance computing system that supports genomic research, hosts the MVP genomics data, and makes that data and the genomic tool sets needed to analyze the data available to VA MVP scientists
- Department of Energy (DOE) Partnership: Aims to advance medical treatment for Veterans and the greater population through the MVP -Computational Health Analytics for Medical Precision to Improve Outcomes Now (CHAMPION) and Advanced Computational and Translational Initiatives for Veterans (ACTIV)
- Multi-Cloud Research Environment: Hybrid, multi-Cloud environment that will be coordinated by a system orchestrator and consist of phenomics, imaging, genomic, and de-identified data

Artificial Intelligence

The VHA Office of Research and Development has laid out a blueprint for advancing AI development through a program of data curation and collaboration between private and public research institutions. Collaborations like this will serve as a template for VA to advance its AI research. Sharing newfound applications of Al and ML between the Federal Government and private sector will allow for the consilience of best practices, creating a knowledge base that would be unfeasible were the two spheres to work in isolation. Focused on strategies, policy, and partnerships, VA's AI Institute will play a greater role in the VA research IT EA as it

Future Environment

Cerner Population Health Platforms

matures.

The transition to the Cerner EHR via EHRM will bring a suite of platforms into grasp for VA research, education, and population health. The opportunity to see a longitudinal Veteran record (extending from active duty status to Veteran status) data as part of these population health analytic platforms represents a major advance. The EHRM data migration and data syndication plans begin to link VA's traditional data model, and technologies to the newer Cerner data model and technologies and careful attention to developments and maturity of these platforms is needed as the 10-year implementation horizon advances.



Y,

FY 2020-FY 2026

MEDICAL RESEARCH, EDUCATION, AND POPULATION HEALTH MILESTONES*

100 study marts

marts

Q4: Ex pand VAEC to 100 study

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* Timelines may shift due to changes in resources and priorities

FY 2021 FY 2022 FY 2024 FY 2025 FY 2026 FY 2020 FY 2023 Q1: Modify VA Multi-Cloud System Orchestrator to handle Q1: Finalize Cemer/EHRM/VA public access to VA Research Q1: Obtain DOE Argonne genomic Research strategy including Q1: Complete testing of data requests and interface enclave authority to operate through EHRM/Cemer Analytics with VHA ORD IRB COTS HealtheDataLabs and DoD data Q3: Ex pand DOE (3 labs) to 600 access requirements solution study marts reciprocity Environment Q1: Complete resolution of DoD data access restrictions and Q1: VAEC central archive for opening DoD data from Cemer all VA Research data from Q2: Transfer first domains of to VA Research through the VA VAMC-level systems with deidentified VINCI/CDW data to linkage to VA Multi-Cloud Q2: Obtain DOE Laurence Livermore Multi-Cloud System Q3: Ex pand VAEC to 1000 study enclave for imaging thru reciprocity UoC Data Commons Orchestrator System Orchestrator Q2: Initiate collaborative Q3: Implement commercial Cloud program management and study marts within the VA integration for data analytics Q2: Deploy EHRM/Cemer genomic return of results for Q2: Establish non-OIT funding for Multi-Cloud Research initiatives within VHA ORD and Q4: Ex pand EHRM/Cemer research enclaves within VAEC (VA Environment (5 study marts as VHA Office of Health HealtheDataLabs to 500 study pharmacogenomics and 6008 revisions required) Informatics precision oncology pilot/testing) Q3: Release V3.0 of VHA ORD IT EA Q2: Complete testing of VA & sync with FY21-25 OIT MYP & Multi-Cloud Orchestrator for Q3: Release V4.0 of VHA ORD VHA Office of Research & IT EA and sync with FY22-26 Q3: Ex pand DOE (3 labs) to Cemer/VAEC/UoC/DOE/VA Development (ORD) MYP OIT MYP and VHA ORD MYP Legacy environments 400 study marts Q3: Release V6.0 of VHA ORD Q4: Obtain VA authority to operate Q2: Complete testing of data for study marts at the University of Q4: Implement 25 study marts at syndication for merged IT EA and sync with FY24-28 DOE (3 labs) OIT MYP and VHA ORD MYP Chicago (UoC) Data Commons CDW/Cemer data to DOE Q4: Ex pand medical and clinical image analytics pilot (6-9 Q3: Release V5.0 of VHA ORD Q4: Ex pand VAEC to 500 Q4: Initiate data de-identification pilot additional image types) at IT EA and sync with FY23-27 within VAEC Livermore National Lab OIT MYP and VHA ORD MYP study marts Q4: Begin importing whole genome sequence data from Q4: Complete migration testing **VISION:** of medical/clinical images from Q4: Deploy Manual System sequencing vendor space in The completion of Medical Research, Orchestrator for VA Multi-Cloud Amazon Web Service to Argonne Cemer Image Solution to Education, & Population Health milestones Livermore National Lab Research Environment will help VA become a learning health system Q4: Ex pand DOE (3 labs) to

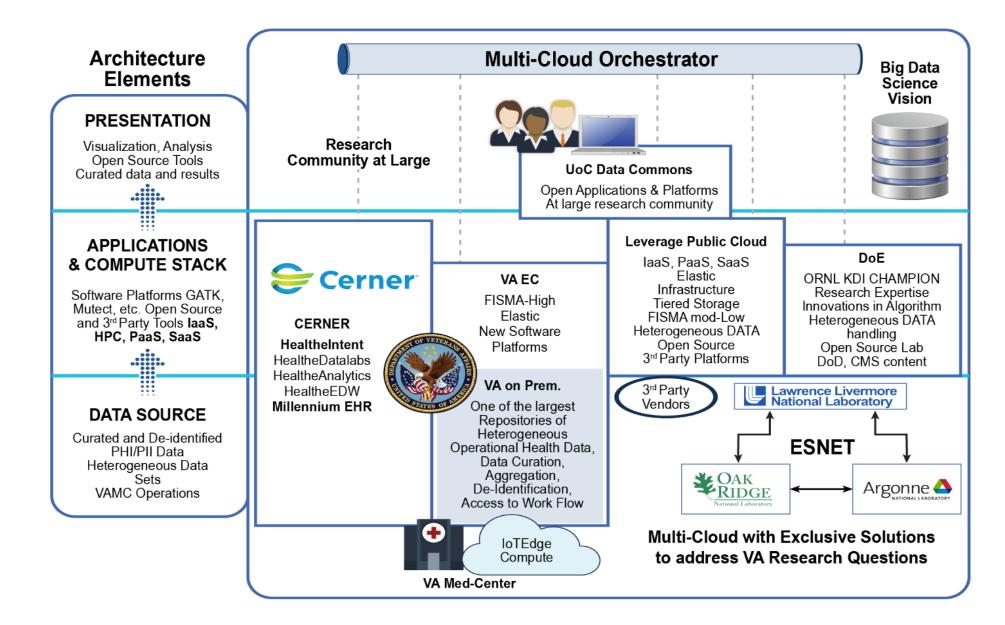


with the ability to make precise diagnostics

and deliver accurate, preventative care.



VA's Multi-Cloud Research Environment





Health Services: Community Care

Current Environment

Drivers

Transformative Initiatives > Future Environment

VA's goal is to provide Veterans with the care they need at the right time and from the right provider. In some cases, this requires eligible participants to receive care from a local community care provider, paid for by VA.

The Community Care Product Line allows Veterans, providers, and VA staff to access tools for care coordination, referrals and authorizations, provider portals, electronic data interchange (EDI), provider payments, and revenue operations.

However, VA's patchwork of multiple separate community care programs is a bureaucratic maze that is difficult for Veterans, their families, and VA employees to navigate.

VA has experienced challenges with claims processing and access to community care. Because community care programs are not organized within a regional structure, programs often overlap in terms of type of function and service. Additionally, the overall care coordination and exchange of health information consist of manual processes and workarounds that are often unreliable.

Demand for community care is increasing, but the numerous existing programs create unnecessary complexity. VA's fragmented claims and payment process results in untimely claims processing and incorrect payments to providers. Additionally, current community care patient accounting requires multiple systems, which results in disconnected information and inaccurate billing.

To streamline VA's community care programs, the president signed the MISSION Act into law on June 6, 2018. The MISSION Act is focused on consolidating VA's existing community care programs into a single Community Care Program (CCP) and empowering VA to build an integrated, holistic system of care that combines the best of VA and its federal, academic, and private sector partners.

Technology advancements—such as APIs, SMART on FHIR apps, health information exchanges (HIEs), AI, big data analytics, and omnichannel customer relationship platforms—are also shaping the future evolution of community care capabilities.

- Community Care Modernization:
 Streamlining disparate systems and processes for purchasing care into an integrated system under the consolidated CCP
- Community Care Referral and Authorization (CCRA): An enterprise-wide system used by community care staff to generate referrals and authorizations
- Community Care Reimbursement System (CCRS): A system that will store all CCP information related to reimbursements to community providers
- Decision Support Tool: Informs VA providers and staff of the availability of services in VA and the Veteran's eligibility for the new Veterans using the CCP
- Caregiver Record Management Application (CARMA): Application that will allow qualified family of severely disabled Veterans to receive stipends from VA for providing caregiver services

The MISSION Act will fundamentally transform elements of VA's health care system, and successful implementation of the legislation will empower VA to deliver quality care and timely service.

The consolidated CCP within the Community Care Network (CCN) will strengthen VA by merging the Department's tangled web of community care programs into one that is simple for Veterans, VA employees, and community partners to navigate.

care networks and provide access to high-quality care both inside and outside of VA. It will be simpler for Veterans to compare access and quality across facilities, allowing them to make more informed care choices.

VA will also achieve transparency with community providers, supporting accurate and timely payments while enhancing quality of care and Veteran satisfaction. Modern community care will utilize standardized and digital clinical workflows that provide improved and consistent Veteran experience and deeper engagement with patients.

Ultimately, VA will seamlessly coordinate care and exchange information with community care providers.

COMMUNITY CARE MILESTONES*

F Y 2020-F Y 2026

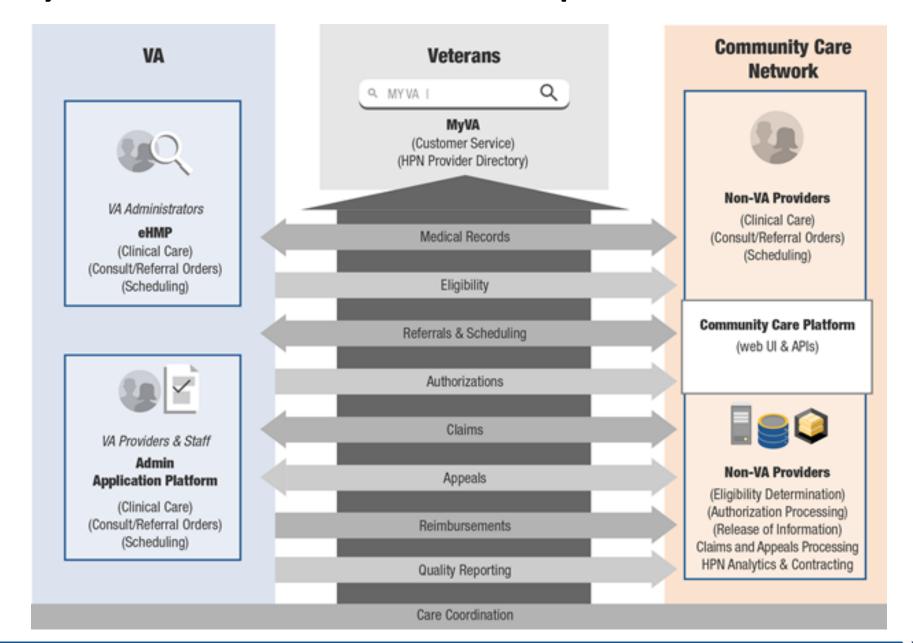
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Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Deploy EPRS enhancements	Q1: EPRS enhancements					
Q1: Deploy Pharmacy Opioid Monitoring	Q1: Deploy eHX enhancements					
Q1: Deploy CARMA minimum viable product to process, track, and manage Caregiver applications	Q1: Deploy Decision Support Tool Enhancements					
Q1: Deploy CCRA National Release 8.0	Q1: Deploy Consult Tool Box Enhancements					
Q1: Deploy Customer Patient Record System enhancements	Q1: Deploy PPMS Phase 2 updates					
Q1: Deploy Fee Payment Processing System 2.0 & EPRS 2.0	Q2: Deploy HSRM Enhancements					
Q2: Deploy eHX opt out feature	Q2: Deploy CCRS enhancements					
Q2: Deploy EDI Dashboard 1.0, EDI Gateway 2.5, and the Attachment Retrieval System (ARS)						
Q2: Deploy PPMS and Integrated Billing/Accounts Receivable enhancements						
Q3: Deploy EDI Dashboard 2.0 and EDI Gateway 3.0						
Q3: Deploy HSRM CCRA enhancements					VISION: The completion of Comilestones will enable	ommunity Care
Q3: Complete CARMA UAT to enable legacy systems integration					requirements of the M achieve transparence	IISSION Act and ywith community
Q3: Deploy CCRA National Release 9.0					providers while enha Veteran satisfaction.	ncing quality of care and
Q4: Deploy EDI Dashboard 3.0 to monitor EDI transactions through the EDI Gateway						



Community Care Future Environment Conceptual Architecture





Health Services: Supply Chain Management

Current Environment

Drivers

Future Environment

VA's supply chain delivers clinical care to Veterans by managing the flow of supplies and equipment. *Currently, VA's supply chain system is comprised of a set of antiquated legacy and COTS systems with disjointed capabilities.*The lack of integration with other VA systems prevents the Department from achieving comprehensive financial, inventory, and supply chain management.

The implementation of the current Supply Chain Management modernization efforts is working toward building a lean, efficient supply chain that provides timely access to meaningful data focused on improved patient care and financial outcomes. VA is achieving greater efficiencies by partnering with other government agencies, such as DoD.

Due to the coronavirus pandemic, VA experienced the same challenges as other hospitals and hospital systems in the country and around the world. However, as the largest integrated health care system in the country with 170 hospitals, VHA was able to share supplies and personnel resources between sites based on immediate healthcare needs.

Effective management of a supply chain is a major differentiator between high-and low-quality health care systems. Over the past decade, oversight bodies have identified ineffective performance by VA's supply chain. This performance leads to patient safety issues and inefficient resource allocation.

In 2019, Secretary Wilkie established four Priorities: Customer Service, MISSION Act Implementation, Electronic Health Record, and Business Systems Transformation. In order to transform business systems, it is necessary to modernize human resource management, finance and acquisition, and supply chain management.

VA is coordinating the implementation activities of DMLSS, Cerner EHR, and the Integrated Financial and Acquisition Management System (iFAMS).

On March 27, 2019, the Secretary issued a memorandum, *Enterprise-Wide Adoption of Defense Medical Logistics Standard Support (DMLSS)*, that directed VA to adopt and implement the DoD's DMLSS application as the fully integrated supply chain solution.

Defense Medical Logistics
 Standard Support (DMLSS): An
 integrated IT logistics system with
 a comprehensive range of medical
 material, war reserve material,
 and facilities management
 functions

Transformative Initiatives

- LogiCole: The technical refresh of DMLSS that will be a single, Cloudbased application, which VA will determine its migration to once the application is operational
- Supply Chain Master Catalog (SCMC): A Software as a Service (SaaS), Cloud-based catalog that harmonizes all VA contract information to become the single source of truth for all supply chain products available for procurement

VA will pursue a holistic supply chain modernization effort that addresses people, training, processes, data, and automated systems, and it will leverage and strengthen its collaboration with DoD to modernize its supply chain.

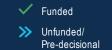
va will deploy DMLSS as the supply chain management system across the enterprise starting with VISN 20. The initial roll out of DMLSS encompasses a client server solution, which requires a DMLSS server to be hosted within VA medical facilities. The InterSystems HealthConnect interface to VA legacy financial systems will transition to VAEC-AWS by FY 2021.

With the transition to LogiCole in FY 2023, supply chain management activities will pivot away from client server solution and be fully managed in the Cloud. LogiCole's synergies with the EHR and iFAMS will enable improved resource efficiency, responsiveness, regulatory compliance, access to care, quality, and safety when combined with data improvements.

Additionally, VA will establish Regional Readiness Centers, geographically distributed to support the four VISN Consortiums, to build resiliency into the supply chain to enable VHA to sustain continuous services to Veterans.

SUPPLY CHAIN MANAGEMENT MILESTONES*

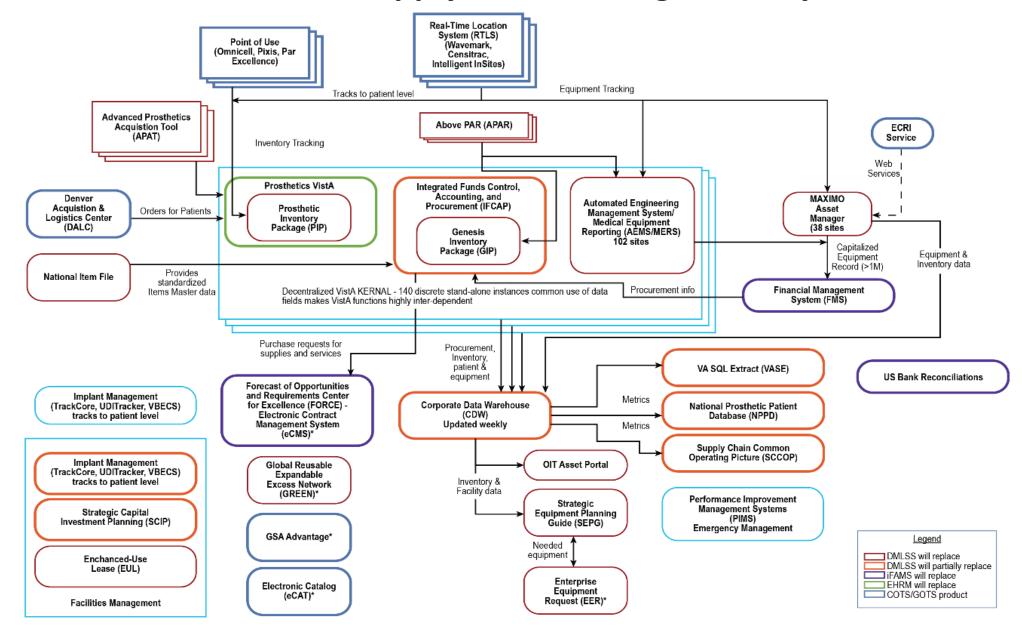
F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q3: Begin SCMC deployment in VA	Q1: Deploy DMLSS at 1% of VAMCs (2 in-total)	Q1: Deploy DMLSS at 21% VAMCs (37 in-total)	Q1: Deploy DMLSS at 45% of VAMCs (78 in-total)	Q1: Deploy LogiCole at 67% of VAMCs (116 in-total)	Q1: Deploy LogiCole at 100% of VAMCs (174 in-total)	
Q4: Deploy DMLSS at JALFHCC and 1 EHRM site (2 in-total)	Q2: Deploy DMLSS at 3% of VAMCs (6 in-total)	Q2: Deploy DMLSS at 29% of VAMCs (51 in-total)	Q1: LogiCole available for deployment at VAMCs	Q2: Deploy LogiCole at 73% of VAMCs (127 in-total)		
	Q4: Begin LogiCole/iFAMS integration activities	Q3: Deploy DMLSS at 35% of VAMCs (61 in-total)	Q2: Deploy DMLSS at 52% of VAMCs (90 in-total)	Q3: Deploy LogiCole at 82% of VAMCs (143 in-total)		
	Q3: Deploy DMLSS at 8% of VAMCs (14 in-total)	Q4: Deploy DMLSS at 41% of VAMCs (71 in-total)	Q3: Deploy LogiCole at 57% of VAMCs (99 in-total)	Q4: Deploy LogiCole at 91% of VAMCs (158 in-total)		
	Q4: Deploy DMLSS at 16% of VAMCs (27 in-total)		Q4: LogiCole replaces all previously deployed DMLSS servers			
			Q4: Complete LogiCole/iFAMS integration activities			
			Q4: Deploy LogiCole at 63% of VAMCs (109 in-total)			
					VISION: The completion of Supply Ch	nain Management
					milestones will enable VA to supply chain modernization e addresses people, training, p	achieve a holistic effort that
					and strengthens collaboration	n with DoD.



Current Environment of VA Supply Chain Management Systems





Benefits and Memorial Services Portfolio Overview

Current Environment

The Benefits and Memorial Services Portfolio aims to provide technology solutions to support VBA's and NCA's essential programs and services, delivering *initiatives for digitization, modernization, automation, and interoperability* of their systems and processes to provide Veterans and their families the most efficient and timely service and benefits.

The Benefits technology environment is currently built on a multi-systems approach and outdated hardware and software that are becoming increasingly obsolete. Legacy systems often fail to integrate, and even where integration exists, extensive duplication of customer data and functionality leads to non-authoritative data sources and complex system interfaces.

In February 2019, OIT successfully released the final software updates necessary to implement the Veterans Appeals Improvement and Modernization Act of 2017 (AMA) functionality. OIT deployed the system enhancements necessary to implement the AMA across three major Benefits systems: Caseflow, Veterans Benefits Management System (VBMS), and Benefits Gateway Services (BGS).

Additionally, VA developed the Burial Operations Support System – Enterprise (BOSS-E) as NCA's main IT system to ensure that all aspects of the interment process are completed efficiently and effectively. The legacy system consists of 14 custom-developed modules that are complex and difficult to update.

Drivers

The VA Priorities and new legislation drive Benefits and Memorial Services modernization. *The Harry W. Colmery Veterans Educational Assistance Act of 2017*, otherwise known as the Forever GI Bill or Colmery Act, expands access to GI Bill benefits, eliminating the requirement for Veterans to use their Post-9/11 GI Bill benefits within 15 years of their last 90-day period of active duty service. Since the passage of the Forever GI Bill, VA has implemented 28 of the law's 34 provisions, 22 of which require significant changes to VA IT systems.

Additionally, the AMA is transforming the benefit claims and appeals process by providing Veterans with new options for seeking review, requiring improved notification of VA decisions, and improving the turnaround time and quality of appeals.

Furthermore, NCA's legacy IT systems cause operational inefficiencies and present security risks. Specifically, its legacy case management system, BOSS-E, lacks the functionality of a modern software application. It requires NCA personnel to manually performscheduling via a text file, which can lead to high hold times and present opportunities for improper scheduling. Therefore, NCA must implement robust IT systems to address current risks, adapt to increasing Veteran interments, and enable efficient delivery of memorial benefits.

Transformative Initiatives

- Education Service (EDU) Managed Service
- Finance and Accounting System (FAS) Redesign
- VR&E Case Management Solution
- Veterans Benefits Management System (VBMS)
- National Work Queue (NWQ) Enhancement
- Beneficiary Identification and Record Locator Subsystem (BIRLS)
 Transformation
- Guaranty Certainty
- Life Insurance Policy Administration Solution (LIPAS)
- Electronic Insurance (EIN)
 Enhancement
- Caseflow
- Benefits Integration Platform (BIP)
- Enterprise Data Warehouse (EDW)
- Memorial Benefits Management System (MBMS)
- Veterans Legacy Memorial (VLM)

Future Environment

VBA will drive toward application modernization resulting in greater availability of standard platforms, common data sharing, and a standardized approach to software delivery. A suite of strategies will drive VBA's core modernization efforts: leveraging integration of more functionalities into VBMS, increasing utilization of Cloudbased commercial products, enhancing currently integrated systems, standardizing record sharing between federal agencies, and replacing or retiring as many legacy systems as possible.

VBA will orient the future environment around a uniform, Veteran-centric approach known as BIP. Built on the technological foundation of VBMS, BIP will consolidate common services and capabilities and operate as VA's unified benefits and services platform.

The Board of Veterans' Appeals (Board) will drive toward application enhancements in order to intake decision reviews and process appeals from VBA, VHA, and NCA, improving the timeliness of decisions.

NCA will implement MBMS to replace BOSS-E and its legacy applications with a more cohesive, compliant, and functional enterprise platform that seamlessly integrates with VA's systems. MBMS will streamline VA's management and operation of the cemeteries that NCA oversees. It will serve as NCA's system of record once VA migrates all BOSS-E applications to the modern platform.



Benefits and Memorial Services: Education and Veteran Readiness and Employment

Current Environment

Drivers

Future Environment

VA's Education Service (EDU) provides benefits to Veterans, Servicemembers, and their qualified family members, such as *paying college tuition*, identifying the right school or training program, and providing career counseling.

The Veteran Readiness and Employment (VR&E) program also provides vocational planning, case management, job skills training, career counseling, and job placement assistance.

EDU's current IT environment is outdated, with legacy systems built upon obsolete software languages and unsupported hardware. Legacy systems duplicate functionality, have led to an inconsistent Veteran experience, and inhibit the consideration of COTS solutions and managed services.

Similarly, VR&E relies on outdated legacy IT systems to provide benefits to Veterans. Due to VR&E's current IT environment, it is limited in its oversight ability and data reliability.

Current legislation driving EDU and VR&E modernization to improve and enhance services provided by VBA includes the Harry W. Colmery Veterans Educational Assistance Act of 2017, otherwise known as the Forever GI Bill or Colmery Act, and the Veterans Benefits and Transition Act of 2018.

The Colmery Act expands access to GI Bill benefits, and the Veterans Benefits and Transition Act of 2018 prohibits colleges and universities from penalizing Veterans for tuition bills that VA did not pay on time, provides Veterans with electronic proof that they will be receiving housing payments from VA, and supports Servicemembers transitioning out of the military.

EDU and VR&E are exploring ways to modernize the entire IT environment to enable improved data management and CX that will lead to effective program decisions and evaluations.

Modernization efforts such as implementing the Finance and Accounting System (FAS) Redesign will upgrade legacy IT systems, allow timely recovery from errors, and enhance performance and visibility into job status.

 EDU Managed Service: Improving the delivery of benefits to Veterans and reducing IT development and sustainment costs

Transformative Initiatives

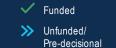
- FAS Redesign: Modernizing the legacy payment and accounting system into a web-based architecture and platform that will enhance efficiency in processing benefits payments, track finance related workload, and improve finance reporting capabilities
- VR&E Case Management
 Solution: SaaS initiative that will
 replace the legacy case
 management system, Corporate
 Waco-Indianapolis-Newark Roanoke-Seattle (CWINRS),
 modernizing the way in which
 VR&E counselors are able to view
 and manage VR&E cases
- VR&E Virtual Assistant (e-VA):
 Leveraging Al to communicate with Veterans participating in the VR&E Program, delivering routine communications, assisting with appointment scheduling, and collecting digital documents from the Veterans as needed throughout their plan of service

VA's EDU and VR&E programs will implement modern systems to enable Veterans and Servicemembers to receive personalized counseling and support to help guide their career paths, ensure the most effective use of their VA benefits, and achieve their goals.

EDU, the Office of Financial Management, and VR&E will increase their use of modernized systems that integrate with other VBA business lines by leveraging SaaS, managed services, and shared services. In an effort to enhance the delivery of benefits, VR&E will reduce the ratio of counselors to Veterans and provide field personnel with 3-in-1 devices and wireless hotspots.

EDUCATION AND VETERAN READINESS AND EMPLOYMENT MILESTONES*

F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q2: Complete Financial and Accounting Legacy System Build 4	Q1: Deploy VR&E Case Management Solution IOC	Q4: Deploy Legislation Updates to the Education Comparison Tool on VA.gov	Q4: Deploy Education Automation of Supplemental and Original Claims	Q4: Incorporate new legislative requirements into Education IT Systems	Q4: Deploy Education Automation of Supplemental and Original Claims	Q4: Deploy Education Automation of Supplemental and Original Claims
Q3: Deploy Colmery Sections 107 Retro, 102, 105, 103, 113, and 116 into Education IT Systems	Q4: Complete FAS Redesign Development	Q4: Deploy Education Availability of Electronic Certificates Eligibility		Q4: Deploy Education Automation of Supplemental and Original Claims		
Q3: Complete Financial and Accounting Legacy System Build 5	Q4: Deploy Education Managed Service					
Q3: Deploy Education Comparison Tool on VA.gov	Q4: Deployment Education Payment Module					
Q3: Initiate Development of FAS Redesign	Q4: Deploy Education Automation of Supplemental and Original Claims					
Q4: Deploy Colmery Sections 101, 108, 109, and 111 into Education IT Systems	Q4: Deploy Education Centralized Mail					
Q4: Implement VR&E Case Management Solution minimum viable product	Q4: Deploy Education Electronic File Management					
Q4: Implement VR&E Virtual Assistant (e-VA) FOC	Q4: Deploy VR&E Centralized Mail & VBMS eFolder					
Q4: Deploy School Profile Updates to the Education Comparison Tool on VA.gov	Q4: Complete VR&E Virtual Assistant Integration with Case Management Solution					
Q4: Deploy Education Electronic Letters	Q4: Decommission Benefits Delivery Network				VISION: The completion of Educa	ation and Votoran
	Q4: Complete Work Study Management System Modemization				Readiness and Employr enable Veterans and Se receive personalized cor	nent milestones will rvicemembers to
					to help guide their caree most effective use of the achieve their goals.	r paths, ensure the
					achieve their goals.	



Benefits and Memorial Services: Compensation and Pension

Current Environment

Drivers

Transformative Initiatives

Future Environment

VBA processes more than 12 million benefit transactions every month and distributes billions of dollars in Veteran entitlements each year. To provide benefits in a secure and timely manner, significant enhancements to the Compensation Service (CS) and Pension and Fiduciary Service (P&F) require digital modernization of the IT environment.

Diminishing knowledge of legacy systems within VBA underlies the urgency for these CS and P&F's decommissioning efforts. As such, CS and P&F seeks to retire the following legacy systems: Veterans Service Network (VETSNET), SHARE, Search and Participant Profile, VETSNET Modern Award Processing Development (MAPD), VETSNET Awards, Virtual VA (VVA), and PC Generated Letters (PCGL).

As VBA works toward reducing dependency on those systems/platforms, P&F also seeks modern systems that leverage automation and rules-based capabilities to more efficiently process claims and enhance integration.

The Secretary's mandates and new legislation drive the CS and P&F modernization. Recent legislative changes will allow more Servicemembers to access benefits for Lump Sum Retirement Pay. To achieve the requirements of this new legislative action, CS and P&F requires significant enhancements to the Benefits IT environment.

Of the 180 million electronic documents being migrated from the legacy platform VVA to VBMS, 0.15% contain Federal Tax Information (FTI). The *inability to store FTI data under contractor control presents an obstacle to technology modernization efforts as* the full VVA technical footprint will remain and cost the government and federal taxpayers an estimated \$46 million over the next 10 years.

- Veterans Benefits Management
 System (VBMS): The backbone of
 the disability claims process within
 CS that facilitates faster delivery of
 disability benefits, helping reduce
 the claims backlog and improve
 accuracy and consistency of
 entitlement decisions
- VBMS/VHA Integration: Integrating VBMS/VHA with EHRM to facilitate the ordering of VHA examinations through VBMS, which will save employee time, reduce administrative burdens, and improve the quality of the Compensation and Pension exam process
- P National Work Queue (NWQ)
 Enhancement: A paperless
 workload management initiative
 designed to improve VBA's overall
 productive capacity and assist with
 eliminating the claims backlog by
 processing all claims within 125 days
 with improved accuracy
- Beneficiary Identification and Record Locator Subsystem (BIRLS) Transformation: Decommissioning the middleware record system, which includes migrating BIRLS unique data and functionality to ADSs and minimizing duplication of data that is available elsewhere

CS and P&F will implement emerging technology, including innovative ways to design and develop automation architecture, leverage existing data to support and inform claims processor actions, enable inter/intra agency data sharing, and execute award/claims actions aimed at improving claims processing timeliness and accuracy.

Greater automation will increase CS and P&F productivity, including expansion of end-to-end processing of burial claims (including automated claims establishment), routing of claims, and batch processing of actions required upon the death of a beneficiary.

VBA is also exploring ways to modify Federal Regulations regarding the handling of FTI and Internal Revenue Service (IRS) essential audit improvements.

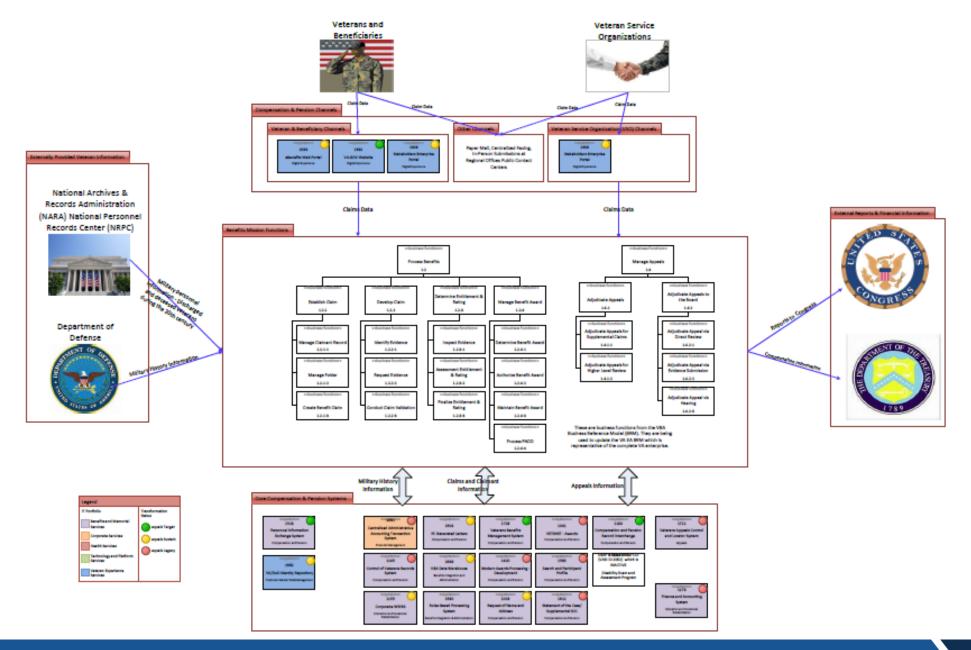
COMPENSATION AND PENSION MILESTONES*

F Y 2020-F Y 2026

FundedUnfunded/Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Remediate editing issues within Caseflow	Q1: Decommission BFFS Microsoft Dynamics 365	Q4: Deploy VBMS Optimizations	Q4: Deploy VBMS Optimizations			
Q2: Transition functionality from BFFS to Microsoft Dynamics 365	Q1: Deploy VBMS Data Availability/API for VBMS		Q4: Decommission BIRLS			
Q2: Assess VBMS/VHA Integration	Q4: Deploy automation of P&F Programs Processes & Functionalities		Q4: Decommission SHARE			
Q3: Deploy automation of Supplemental and Original Claims	Q4: Deploy VBMS Optimizations		Q4: Decommission COVERS			
Q4: Deploy automation of P&F Programs Processes & Functionalities	Q4: Initiate decommissioning of BIRLS					
Q4: Initiate development of VBMS Data Availability/API for VBMS	Q4: Deploy capability for Regional Office Users to simulate and validate auto-assignment rules					
Q4: Deploy automation of P&F Programs Processes & Functionalities	Q4: Deploy ex pansion of Pension Forms available for electronic submission					
Q4: Deploy VBMS Optimizations	Q4: Deploy Pension Automation Enhancements					
Q4: Implement NWQ Prior Assignment Routing	Q4: Deploy Fiduciary Automation of Process and Functionalities					
Q4: Decommission MAP-D & Awards	Q4: Deploy JSRRC Replacement				VISION:	
Q4: Implement Future FTI Solution					The completion of Completion of Pension milestones will	enable greater
					automation that will incre expand end-to-end proc batch processing of clair	cessing, routing, and
					batch processing ordan	115.

***** Compensation and Pension Product Line





Benefits and Memorial Services: Loan Guaranty

Current Environment

The Loan Guaranty Service (LGY) aims to maximize Veterans' and Servicemembers' opportunity to obtain, retain, and adapt homes by providing a viable and fiscally responsible benefit program in recognition of their services to the nation.

To accomplish this, LGY identified three priorities (Veteran Access to Benefits, Automation, and Reporting) that will propel the program forward through increased Veteran transparency, improved collaboration with industry partners, and innovative solutions to increase participation and reduce program risk.

These priorities directly support LGY's strategic objectives and align with LGY goals, which make VA Home Loans the product of choice and promote positive Veteran outcomes.

Drivers

Veteran Access to Benefits

LGY provides a viable and progressive loan program as a benefit for eligible Veterans and Servicemembers to obtain homes, while maximizing fiscally responsible opportunities for Veterans and Servicemembers to retain their homes or avoid foreclosure during times of financial hardship.

Automation

The mortgage banking industry has focused on lending process automation to capitalize on reduced time and costs and increase quality. In keeping with mortgage industry trends, LGY will focus on re-imagining its current platform to create an end-to-end process environment.

Reporting

The Federal Government continues to focus on increased transparency, business intelligence, and reporting to better serve Veterans and the taxpayer. LGY must focus on business intelligence solutions to generate meaningful, evidence-based insights to address growing transparency and data demands.

Transformative Initiatives

- Workflow Automation:
 Integrating all core benefit delivery processes into a single platform to streamline benefit delivery
- Guaranty Certainty: Providing lenders with a more intuitive loan process to increase Veterans' home loan options and improve Veteran experiences through improved functionality development, improved tool development and requirements to enhance the experience, and a smoother workflow
- Enhance Customer Experience:
 Developing and implementing self-service portals to assist Veterans and lenders/servicers with managing loans
- Improved Loss Mitigation and Retention Monitoring: Enhancing non-performing loan (NPL) default reporting standards and NPL workflow development and deployment to improve retention of homes for Veterans that are facing financial hardships or unexpected life circumstances

Future Environment

Enhancements to the VA Loan Electronic Reporting Interface Re-Design (VALERI-R) will allow LGY modernization to drive improvements to home loan services by engaging with the Veteran and lending industry for all loan lifecycles. These enhancements will require technological investments in four key areas to improve the Veteran and vendor experience.

By utilizing API-based interactions, LGY will enable external partners to integrate using APIs instead of leveraging the LGY graphical user interface based applications that require re-keying of data originating from external partner systems.

A Cloud native data analytics platform will help establish a robust, scalable data analytics platform that meets business requirements needed to measure and predict business performance and risk.

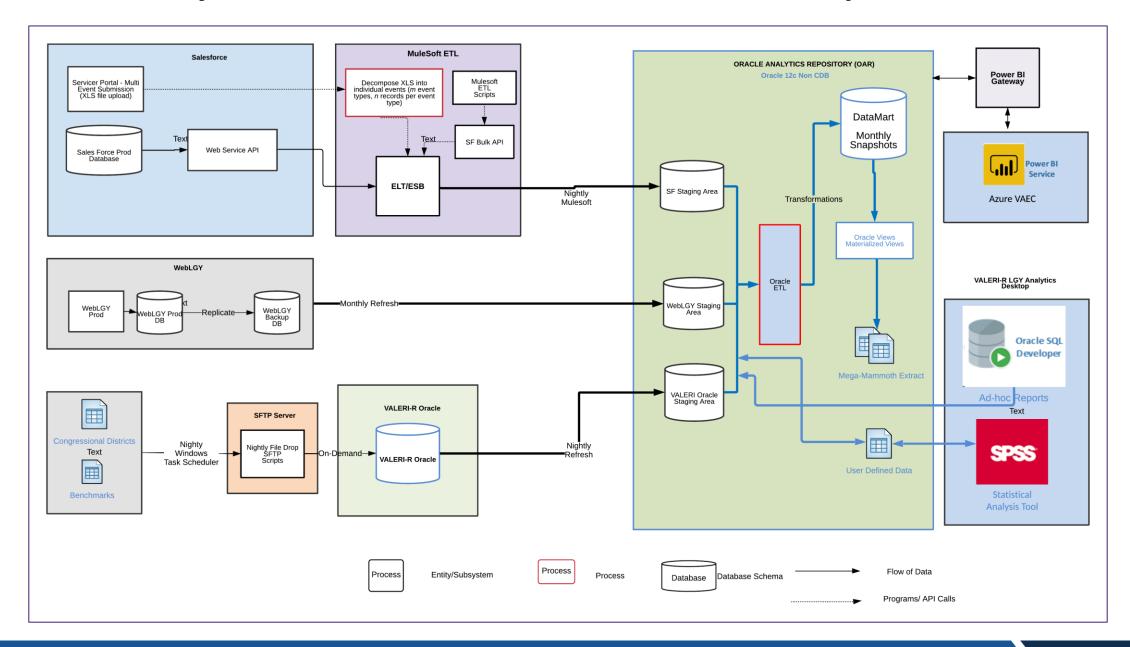
Regarding *maturing DevSecOps practices in the Cloud,* LGY will automate push-button deployments that strike a balance between quality and speed.

Lastly, as the LGY Product Line is improved upon, the VALERI-R platform can be leveraged by more closely aligning to the Digital Transformation Center's design patterns and best practices.

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Complete AMS/AVM Project Execution	Q1: Complete LGY Workflow Requirements	Q1: Deploy AQS to Lenders	Q1: Complete Enhanced Scorecard Procurement	Q1: Complete Performance Monitoring Pilot	Q1: Complete Regulation Analysis and Updates	
Q1: Complete AMS/AVM Legacy Data Transition	Q1: Complete DevSecOps Execution (VALERI Environment Enhancements)	Q1: Complete LGY Appraisal Risk Management Pilot	Q1: Complete Performance Monitoring Policy Review and Updates	Q1: Complete Audit Stakeholder Pilot	Q2: Complete Workflow Automation: LGY Workflow Environment Development	
Q1: Define LGY DevSecOps Future Environment	Q1: Complete AQS Integration into VALERI (Phase 2)	Q1: Complete AMS Integration with VA Guaranty Certainty (Phase 1)	Q1: Complete LGY Oversight/ERM Infrastructure Development	Q1: Complete Loss Mitigation Policy Review and Updates	Q3: Complete Industry Partner Performance Monitoring Policy & Pilot	
Q2: Initiate Implementation of LGY DevSecOps Roadmap	Q1: Continue Migration of LGY Suite of Applications to VAEC	Q1: Complete Data Infrastructure Sustainment	Q2: Complete LGY Workflow Environment Development	Q3: Complete CX Stakeholder Pilot	Q4: Completed CX Enhancement Policy Review, Comms., & Pilot	
Q2: Define LGY Technology Stack Rationalization Plan	Q1: Continue Loan Underwriting, Credit Verification, Guaranty Certainty	Q1: Continue Maturing the LGY Data Analytics Platform	Q2: Complete CX Portal Procurement	Q3: Deploy Loan Audit Functionality	Q4: Complete Target Risk-Based Audits RLC, Policy Review, Comms., & Pilot	
Q2: Leverage API Framework from BIP	Q1: Continue Integration with the Lending Industry	Q2: Complete Guaranty Certainty Pilot	Q2: Complete Audit Metrics and Workflow Development	Q3: Complete NPL Default Reporting Standards Review	Q4: Complete Improved Loss Mitigation & Retention Monitoring Policy & Pilot	
Q2: Complete Web LGY/VALERI Workflow Enhancements	Q1: Achieve Agreed Upon Target Well Managed State on the Cloud	Q2: Complete LGY Workflow Procurement	Q2: Complete Audit Industry Communications	Q3: Complete Loss Mitigation Communications	Q4: Complete LGY Oversight/ERM Infrastructure Deployment	
Q2: Complete DevSecOps Procurement	Q3: Complete Cloud Implementation of the Data Analytics Roadmap	Q3: Enhance Scorecard Requirements	Q3: Complete Performance Monitoring Communications	Q4: Complete Performance Monitoring Industry Rollout	Q4: Complete Streamlined System Enhancement	
Q3: Initiate Implementation of Data Analytics Cloud Native Solution	Q3: Complete LGY Transition to VA.gov	Q4: Complete Loan Audit Requirements	Q3: Complete Performance Monitoring Metrics Dev. & Portal Integration	Q4: Complete CX Portal Development		
Q4: Achieve LGY DevSecOps 2020 Environment	Q4: Complete LGY Oversight/ERM Infrastructure Procurement	Q4: Complete Loan Audit Policy Review and Updates	Q4: Complete CX Portal Design and Development	Q4: Complete NPL Workflow Development and Deployment	VISION:	
Q4: Simplify Gateway Integration and API Orchestration Tools	Q4: Complete Transition of LGY Calls to NCC	Q4: Complete CX Portal Requirements	Q4: Complete CX Industry Communications		The completion of Loa will enable Veteran-ce	ntric digitaĺ
Q4: Complete Bulk Guaranty Pilot	Q4: Operationalize Target Data Analytics Platform	Q4: Complete Servicing and Origination Extract to Lake			transformation that driven the enhancements to VA homeonic products.	
Q4: Complete Program Participate Self-Service	Q4: Continue Maturing DevSecOps Practices	Q4: Complete Guaranty Certainty Industry Rollout			products.	
Q4: Deploy Updated FFLR to Enable Targeted Risk-Based Audits						



Loan Guaranty Product Line As-Is Data Architecture - Expanded View





Benefits and Memorial Services: Insurance

Current Environment

Drivers

Transformative Initiatives

Future Environment

Insurance Service (INS) provides valuable life insurance benefits that extend financial security for a Veteran's family given the extraordinary risks involved in military service.

INS has an operational need for a modern insurance system that will provide a sustainable solution to improve operations. Its legacy systems are becoming increasingly outdated as they depend on obsolete software languages and hardware that is difficult to support.

INS currently utilizes two primary legacy systems: Insurance Payment System (IPS) and Veterans Insurance Claims Tracking and Response System (VICTARS). IPS, which is hosted on the mainframe, has an original code base from 1959 while VICTARS, which is built on a client server architecture, has a code base from 1995.

INS legacy systems use outdated equipment and procedures causing difficult transitions for new employees accustomed to modern methodologies. The IPS mainframe-based product utilizes overnight batch processing, which can cause client-server processing delays when errors occur.

The instability of the IPS legacy system results in processing issues, such as delayed claims processing and incorrect or delayed payments. Legacy INS system instability also leads to difficulty maintaining accurate and timely financial accounting information.

Furthermore, INS uses VICTARS, which receives information from IPS daily. Due to the relationship between IPS and VICTARS and the overnight IPS batch processing nature, delays may occur since processing is not real-time and processed work can be rejected at a later point.

- Life Insurance Policy
 Administration Solution
 (LIPAS): A solution that will
 replace the VICTARS and IPS,
 mainframe and client server
 applications; modernize
 business processes; and
 integrate Veterans' insurance
 records with the VBMS
 eFolder and VBA Corporate
 Database
- Electronic Insurance (EIN)
 Enhancement: Adding self-service capabilities on the EIN website that allow Veterans to check the status of loan requests, securely submit documents, and update beneficiary designations
- Legacy System
 Decommissioning:
 Transitioning functionality from legacy systems, such as IPS and VICTARS

INS will orient the future environment around a uniform, Veteran-centric approach in VAEC using the LIPAS COTS product.

LIPAS will support VA's buy-first strategy for services that can be delivered most effectively through managed services or COTS solutions.

INS will drive toward application modernization resulting in greater availability of standard platforms, common data sharing, and a standardized approach to software delivery.

A suite of strategies will drive INS's core modernization efforts: leveraging integration of more functionalities; increasing utilization of Cloud-based commercial products; enhancing currently integrated systems; standardizing record sharing between federal agencies, and replacing or retiring legacy systems, such IPS and VICTARS.

INSURANCE MILESTONES*

F Y 2020-F Y 2026

✓ Funded >>> Unfunded/ Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Deploy Running Awards in S	Q3: Process new applications for SDVI and VMLI policies in LIPAS Q3: Administer newly added SDVI and VMLI policies LIPAS	Q3: Migrate Closed Program policies to LIPAS Q4: Decommission VICTARS	Q4: Deploy Credit Card Service for Payments	Q4: Deploy Paperless Billing Function	Q4: Deploy Automation Central Mail Functionality	
					VISION: The completion of Insuenable Veteran-centric	rance milestones will
					modernization that res availability of standard	ults in greater platforms, common dardized interfaces and



Benefits and Memorial Services: Appeals

Current Environment

Drivers

Transformative Initiatives > Future Environment

The Board of Veterans' Appeals (Board) has jurisdiction over appeals arising from determinations by Agencies of Original Jurisdiction, including VBA, VHA, NCA, and the Office of the General Counsel (OGC).

In FY 2019, the Board decided 95,089 appeals—the highest number for any FY. The Board surpassed its FY 2020 decision goal of 91,500 decisions and is on pace to decide over 100,000 appeals in FY 2020.

The projected appeals workload has prompted the Board to work with OIT and other VA partners to seek a cohesive and unified strategy to address all aspects of appeals modernization.

OIT and the Board successfully released the Caseflow IOC necessary to implement the AMA on February 19, 2019. Enhancements necessary to implement the AMA were also deployed to VBMS and BGS. IOC of the Appeals Resource Management System (ARMS) followed on January 31, 2020.

Historically, Veterans have waited six years on average before a final appeals decision. As a result, the number of pending appeals increased significantly. Due to increasing appeals volume, the effectiveness of the Veterans Appeals Control and Locator System (VACOLS) became a concern.

The inefficiencies required to conduct business through VACOLS and other legacy Board systems have led to inconsistent Veteran experience, challenges with timeliness, and complex system interfaces.

Additionally, requirements to integrate with other VA systems inhibits the Board's consideration of COTS solutions and managed services.

Modernization of VA's Enterprise
Appeals Process is necessary to
enable VA to adjudicate appeals
efficiently through timely and highquality decisions of those appeals. If
the VA appeals process along with
supporting technologies is not
modernized, Veterans, their families,
dependents, and beneficiaries will
continue to experience multi-year
delays in receiving a decision on their
appeals.

- Caseflow: A web-based application with expanded capabilities that will streamline the way benefit claims appeals are processed
- Virtual Tele-Hearings: A solution that enables Veterans to attend their Board hearings via secure video conferencing over the internet, allowing Veterans to access them remotely and VA to record and then store the hearings
- Legacy System
 Decommissioning: Modernizing
 the appeals process with a plan
 to iteratively replace VACOLS
 with a new automated,
 integrated, and end-to-end
 workflow system, Caseflow, and
 a resource management system,
 ARMS

The Board is committed to improving the effectiveness and timeliness of deciding Veteran appeals of VA benefits and services decisions and will ensure faster and more responsive decision resolution for Veterans. This will be accomplished by delivering appeals processing and management capabilities that support configuring and implementing a Veteran-centric appeals processing and management solution.

In order to achieve its goals, the Board will complete appeals automation in Caseflow to intake decision reviews; process appeals from VBA, VHA, and NCA; and improve the timeliness of decisions.

The Appeals Product Line will include a data lake to aggregate data from disparate sources to improve congressionally mandated reporting and workload management. By modernizing the Board's systems, VA will ensure that the Board receives and processes Veterans' appeals and supporting evidence to result in legally correct decisions on their appeals in a more efficient and faster manner, reducing the cost per appeal and ultimately improving CX.

APPEALS MILESTONES*

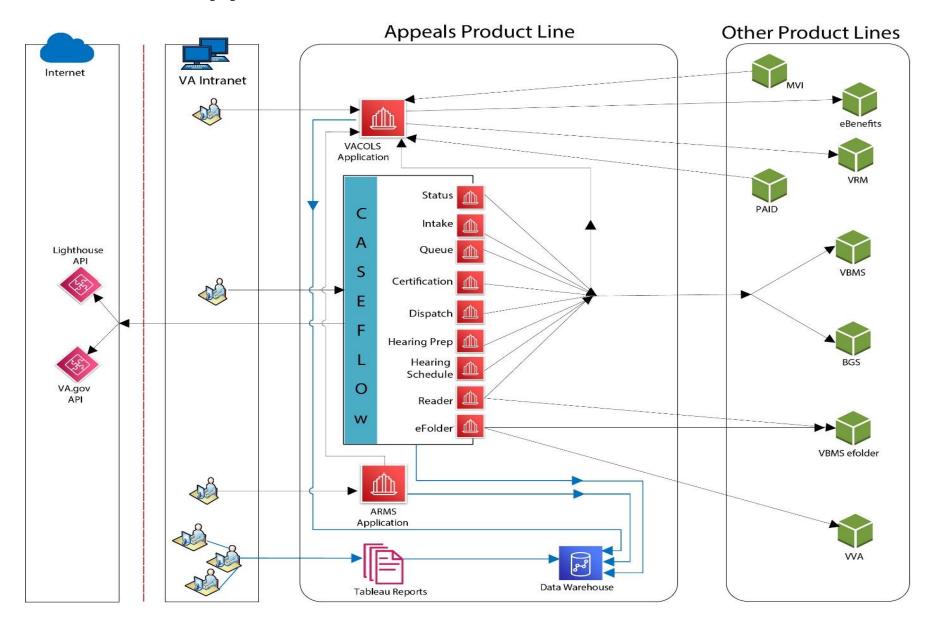
F Y 2020-F Y 2026

FundedUnfunded/Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Deploy missing ratings integration	Q1: Deploy Caseflow Intake functionality to intake all VBA decision reviews and appeals to the Board	Q1: Complete analysis of opportunities to incorporate Al into the Appeals Product Line	Q1: Deploy Al functionality for automating appeals and processing tasks subject to human error or inaccuracy IOC	Q1: Complete 3 of 9 VACOLS decommissioning sub-projects	Q1: Deploy CLE credit processing and Attorney license processing via ARMS FOC	Q1: Complete VACOLS decommissioning
Q1: Deploy Virtual Hearings Generation 2 Recording Functionality and Storage Installation	Q2: Initiate first sub-project to decommission VACOLS	Q3:Initiate development of VHA Enhancements to Caseflow	Q2: Deploy IDT replacement FOC	Q2: Deploy Caseflow enhancements to achieve Chairman's FY24 goal for decisions issued	Q1: Deploy Board personnel performance monitoring FOC	Q2: Deploy Caseflow enhancements to achieve Chairman's FY26 goal for decisions issued
O2: Complete attorney fees work and finalize async jobs work	Q4: Streamline architecture to include the ability to interface with and read data from ex temal sources to support reporting and business analytic requirements	Q4: Deploy Interactive Design Template (IDT) replacement IOC	Q3: Implement ML to identify important evidence in Reader to enable faster, more accurate decisions for Veterans	Q3: Deploy VHA Decision Reviews FOC	Q2: Complete 3 of the remaining 6 VACOLS decommissioning subprojects	Q4: Deploy Al functionality to help meet Chairman's FY27 goal for decisions issued
Q2: Deploy functionality for the Board to assign overtime AMA cases and allow IHP-writing, national VSOs to "broker" cases	C4: Complete the ability to switch appeals from one AMA lane to another upon request by the appellant	Q4: Establish an agreement with strategic partners for Virtual Hearings	Q3: Deploy VHA Decision Reviews IOC	Q4: Deploy Al capability for ML to identify important evidence in Reader to enable faster, more accurate decisions for Veterans FOC	Q2: Deploy Caseflow enhancements to achieve Chairman's FY25 goal for decisions issued	
Q2: Complete edit claim labels work		Q4: Complete integration of ARMS with Financial Management System replacement (DBS)	Q4: Deploy Al functionality for automating appeals-processing tasks subject to human error or inaccuracy FOC		Q3: Identify additional Al functionality to help meet Chairman's FY27 goal for decisions issued	
Q2: Initiate Virtual Hearing Generation 2 testing						
Q2: Initiate nationwide deployment of phase 1 Virtual Hearing solution						
Q3: Deploy special case movement – move cases to judge for decision Q4: Deploy Appeals Processing Enhancements to establish decision reviews with missing ratings in Corporate Database (Caseflow/Corporate/VBMS Integration)					VISION: The completion of Appe enable the Board to deliving processing and manage provides more responsiful improves the effectivened Veteran appeals for VA	ver modern appeals ement capabilities that eve results and ss and timeliness of



Board of Veterans' Appeals Products





Benefits and Memorial Services: Benefits Integration and Administration

Current Environment

Drivers

Future Environment

The Benefits Integration and Administration (BIA) Product Line was formed in late 2019 and focuses on products that provide (1) platform, (2) data and business intelligence, (3) system integration and automation, and (4) administrative capabilities within the benefits and memorial services space.

Although there are seven products within the BIA Product Line, *BIP is the centerpiece product*. BIP is a *modern Kubernetes- and Dockerbased Platform as a Service (PaaS) that resides within VAEC in the AWS GovCloud environment*. It currently hosts VBMS components, MBMS components, and various services (e.g., APIs) within its production cluster.

Technology employed by some products within the Product Line is outdated and becoming increasingly obsolete. This includes hardware and software as well as the methods and processes used to develop and deliver the software.

Legacy technology poses a significant risk to VBA and NCA's ability to provide benefits in a consistent, secure, timely, and cost-effective manner. The inefficiencies that result when conducting business with products with legacy technology lead to inconsistent Veteran experiences, complex system interfaces, data duplication, function duplication, and other issues.

Recent legislative changes will expand and simplify access to benefits for Veterans. To achieve the requirements of the new legislation, VBA and NCA must significantly enhance their IT environments. The BIA Product Line will support this effort by helping decommission or refactor systems that employ legacy technology and shift to modern technology and software development methods.

 Benefits Integration Platform (BIP): A Kubernetes- and Docker-based PaaS tightly coupled with a modern API framework that allows teams supporting VBA and NCA to quickly and easily develop, deploy, scale, and manage container-based applications in a multi-tenant Cloud environment

Transformative Initiatives

- Corporate Database: A
 collection of non-Cloud
 systems that primarily host an
 Oracle-based database
 (containing benefits data) and
 VETSNET, acting as a
 repository for most benefits
 related data
- Enterprise Data Warehouse (EDW): Leveraging the transactional data of the Corporate Database to enable the production of business intelligence for VBA

BIA will continue to be at the forefront of the modernization and optimization effort within VA's operating environment. This will be achieved by increasing the utilization of Cloud-based products and services and leveraging human-centered design to develop highly efficient interfaces and systems.

BIA will also support VA's buy-first strategy for products and services that can be delivered most effectively through managed services or COTS solutions.

Furthermore, AI, containerization, open source, Infrastructure as Code, and serverless architecture technologies will be leveraged to improve efficiencies, facilitate the retirement of legacy systems, and posture VA for future growth and stability.

BENEFITS INTEGRATION AND ADMINISTRATION MILESTONES*

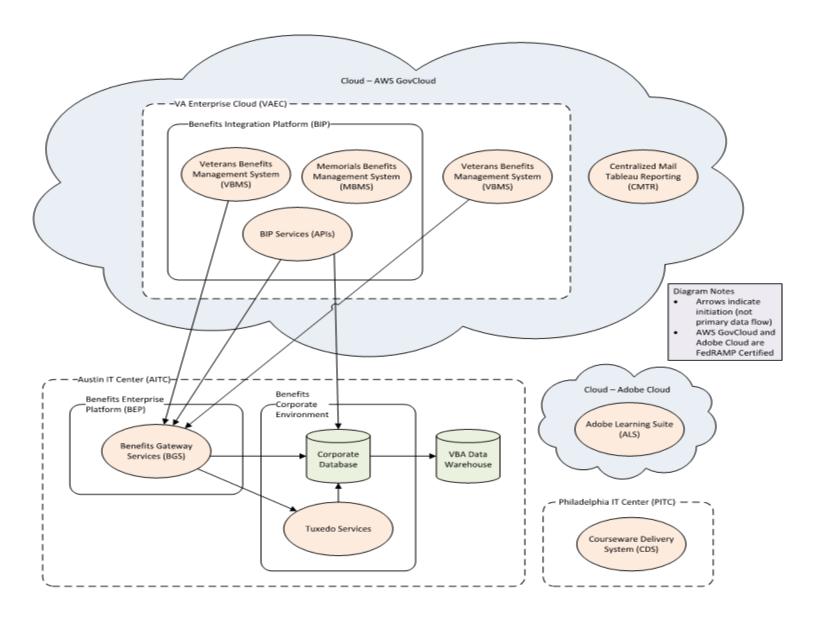
F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q2: Develop technical approach for migrating all services within Benefits Integration Services (BGS) to BIP	Q1: Complete the upgrade of the VBA Data Warehouse environment to the new Oracle SuperCluster M8	Q1: Ex plore additional applications of AI for benefits processing within BIP services (APIs)	Q1: Initiate Oracle Tuxedo 12c client upgrades	Q1: Migrate Corporate Database to VAEC	Q1: Ex plore the feasibility of a dual deployment of BIP within VAEC-Azure	Q1: Ex plore BIP Serverless Architecture
Q2: Complete Oracle WebLogic 12c upgrades within Benefits Enterprise Platform (BEP)	Q1: Decommission Group 1 software from Corporate Database	Q1: Complete the migration of all services within BGS to BIP	Q1: Upgrade Corporate Database to Oracle Tux edo 12c	Q3: Migrate BEP to VAEC	Q1: Complete the migration of CDS to VAEC or a full transfer of capabilities to ALS	Q4: Decommission BEP
Q2: Complete the migration of all BIP tenants from v1 to v2	Q2: Complete BMC Control-M upgrades across all Corporate Database environments	Q1: Perform an analysis of the Oracle Tux edo environment to develop a long-term strategy for sustainment and eventual decommission	Q1: Plan migration of Courseware Delivery System (CDS) to VAEC or full transfer of capabilities to Adobe Learning Suite (ALS)	Q3: Migrate VBA Data Warehouse to VAEC	Q2: Refresh upgrade strategy for Oracle Database/WebLogic/ Tux edo software in the BEP and Corporate Database	
Q2: Deploy an enhanced Claims API in BIP	Q3: Implement data archiving within Corporate Database	Q1: Ex plore feasibility of migrating Corporate Database to VAEC	Q2: Develop technical approach for implementing a data lake for the Corporate Database	Q3: Implement support for the Ex perience API (x API) within ALS	Q3: Complete integration with VBA assessments, surveys, and Employee Job Task Analysis within ALS	
Q3: Complete Dynatrace and Twistlock implementations within BIP	Q3: Devise strategy for reducing data volumes within VBA Corporate Data Warehouse	O2: Complete the refracting of the BGS ratings and awards services		Q4: Implement a data lake for Corporate Database		
Q3: Migrate continuous integration tasks from Hudson to Jenkins within BEP	Q4: Upgrade the Oracle Tux edo and Corporate Database servers to the new Oracle SuperCluster M8	Q2: Ex plore feasibility of migrating BEP to VAEC		Q4: Devise and ex ecute plan for migrating all tenants off BEP		
Q3: Decommission all BIP v1 infrastructure and components	Q4: Complete the deployment of BIP within VAEC GovCloud East region (required to support ex panded disaster recovery capabilities)	Q3: Ex plore feasibility of migrating VBA Data Warehouse to VAEC				
Q3: Rollout DocGen for general use across the portfolio		Q3: Complete the integration of GitHub and Dimensions CM within SIO			VISION:	ofto lateracion and
Q4: Complete the migration of all VBMS components to BIP					The completion of Ben Administration milestor advanced technology	nes will provide solutions that improves
Q4: Support the production launch of the VBA Pension and Fiduciary automation components on BIP					benefit claims process and service delivery.	ing, case management,
					_	



BIA High-Level Architecture





Benefits and Memorial Services: Memorial Benefits and Services

Current Environment

Drivers

Future Environment

NCA oversees the largest cemetery system in the country with over four million Americans memorialized by burial in VA's national cemeteries.

Over the past 25 years, NCA developed BOSS as its main IT system to ensure all aspects of the interment and inurnment processes are completed efficiently and effectively. BOSS-E supports cemeteries nationwide with 3.7 million occupied gravesites and processes over 135,000 new interments annually. The legacy system consists of 14 custom-developed modules that are complex and difficult to update.

Implemented in 1994, BOSS-E is no longer compatible with VA's needs, and NCA's continued reliance on BOSS-E is a major risk. The legacy IT system fails to comply with security and accessibility requirements, lacks integration with other VA systems, and relies on manual processes. To transition to a modern solution and decommission BOSS-E, OIT is developing MBMS.

NCA's legacy IT systems cause operational inefficiencies and present security risks. Specifically, the legacy case management system, BOSS-E, lacks the functionality of a modern software application.

Modern solutions are required to improve access to memorial benefits tracking and delivery as well as enduser functionality. These solutions will enable NCA to continue providing excellent customer service that is consistently positive for Veterans and their families in terms of ease, effectiveness, and emotional resonance.

Furthermore, the 2018 Presidential Memorial Day Proclamation, announced the development of a single-source tool to memorialize Veterans and safeguard their legacy. As such, the Veterans Legacy Memorial (VLM) was developed via Cloud technology and APIs. The VLM is an online memorialization platform to maintain Veterans' legacies honored in perpetuity.

 Memorial Benefits Management System (MBMS): A solution that enables the Department to decommission legacy Memorials systems, platforms, and processes and increase standardization and access to authoritative data across Lines of Business (LoBs)

Transformative Initiatives

- Veterans Legacy Memorial (VLM): An interactive online memorialization platform designed to honor the service and sacrifice of the nation's Veterans
- BOSS-E Decommissioning:
 Transitioning users from the 14 custom-built legacy systems within BOSS-E by leveraging MBMS, VA systems, and COTS solutions
- Infrastructure Modernization:
 Migrating NCA to the Cisco
 Unified Call Center Enterprise
 platform to efficiently address the
 volume of calls from Veterans,
 families, and their
 representatives

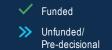
NCA will implement MBMS to replace BOSS-E and its legacy applications with a more cohesive, compliant, and functional enterprise platform that seamlessly integrates with other VA systems. MBMS will streamline VA's management and operation of the cemeteries that NCA oversees and serve as NCA's system of record once VA migrates all BOSS-E applications to the modern platform.

Additionally, VA will leverage shared services in order to meet the mission needs of NCA and realize cost savings by reducing duplicative and antiquated systems. NCA will use VA enterprisewide solutions, where available, and procure COTS solutions for services that are integral to NCA's mission.

New features will include seamlessly referenced authoritative data from appropriate sources, automated approvals, and geographic information system (GIS) digital mapping that allows cemetery visitors to obtain walking directions to gravesites via their cell phones. Additionally, Veterans and their families will be able to submit online self-service Pre-Need or Time of Need applications for burial services and all other memorial benefits.

MEMORIAL BENEFITS AND SERVICES MILESTONES*

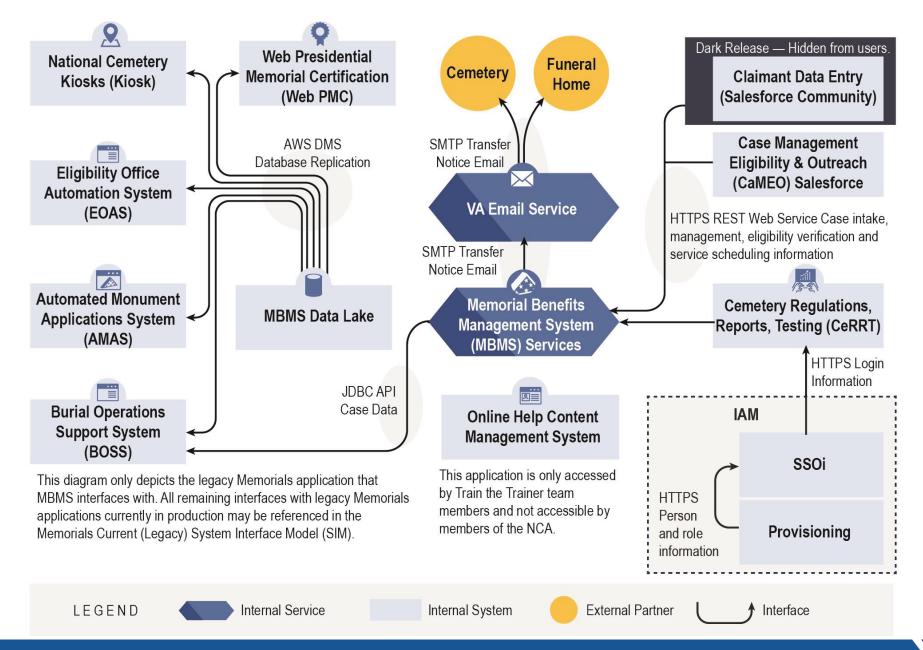
F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Deploy functionality that allows moderated content on VLM	Q1: Deploy MBMS Funeral Home Time of Need case entry pilot	Q2: Deploy MBMS GAR	Q1: Initiate delivery of MBMS Pre-Need enhancements	Q1: Complete VLM Phase 4 Geospatial Digital Renderings	Q2: Decommission BOSS and AMAS Databases	
Q2: Transition VLM Database to Dynamo	Q3: Deliver Eligibility Determination	Q2: Deploy MADSS	Q4: Deploy VLM functionality that enables pre-designation of who serves as custodian for VLM page by Veterans	Q2: Deploy Nationwide Gravesite Locator (NGL)	Q3: Complete MBMS Cemetery Management Modemization	
Q2: Copy legacy data to MBMS Cloud	Q3: Deploy Pre-Need processing and conversion to Time of Need case	Q4: Complete Phase 3 of VLM Geospatial Digital Renderings	Q4: Deploy VLM functionality that enables pre-determination of VLM account page by Veterans	Q2: Deploy Daily Burial Schedule (DBS)	Q4: Deliver New MBMS Self- Service Tools that enables the public to order Presidential Memorial Certificates online	
Q4: Integrate GIS into MBMS	Q3: Stabilize MBMS Platform for National Cemetery Scheduling Office			Q4: Complete Phase 5 of VLM Geospatial Digital Renderings	Q4: Deliver new MBMS Self- Service Tools that enables cemetery visitors to obtain walking directions to gravesites while using their cell phones	
Q4: Integrate Tableau reporting into MBMS	Q4: Initiate MBMS Cemetery Management Modernization				O4: Deploy MBMS functionality that enables pre-designation of who receives Presidential Memorial Certificates	
Q4: Complete Phase 1 of VLM Geospatial Digital Renderings	Q4: Deploy MBMS Headstone and Marker Ordering				Q4: Decommission all remaining legacy NCA Applications	
	Q4: Complete Phase 2 of VLM Geospatial Digital Renderings					
	Q4: Deploy MBMS functionally that enables Funeral Directors to schedule services					
	Q4: Discontinue use of BOSS legacy database for scheduling				VISION: The completion of Mer	
	Q4: Complete Feith Document conversion				Services milestones w leverage shared servic mission needs of NCA	es in order to meet the
	Q4: Consolidate Memorial Enterprise Letters into MBMS				and deploy digital solut improve CX.	

*

MBMS v2.0 Interim System Interface Model





Corporate Services Portfolio Overview

Current Environment

The Corporate Services Portfolio provides IT support to VA's Administrations, Staff Offices, and boards and consists of customer service and back-office operations that are integral to running the business at VA.

Currently, the Corporate Services
Portfolio relies on multiple
outdated and interconnected
systems that have outlived their
effectiveness. VA's use of obsolete
legacy systems and different
platforms has created a
fragmented environment with
unstandardized processes and, as
a result, inconsistent CX.

However, through Corporate Services initiatives, VA is taking steps to transform its Acquisition and Property Management, Financial Management, Human Capital Management, and SecVA/Congressional/Legal Affairs (SCLA) technology to improve its service to Veterans.

Drivers

Both internal business imperatives from across VA and external guidance drive Corporate Services modernization efforts. The *current Corporate Services technology environment leads to significant costs, operational risks*, decreased efficiency, and unpredictable CX.

Key legacy systems are extremely outdated, with VA's legacy financial and human resources (HR) systems being over 30 and 50 years old, respectively. These legacy systems do not comply with federal regulations and mandates.

VA's modernization strategy within the Corporate Services Portfolio is further guided by the PMA, OMB's mandate regarding financial shared services, and the need to link financial and acquisition systems for effective management of the entire acquisition lifecycle.

Transformative Initiatives

- Knowledge Management System
- Veterans EnterpriseManagement System (VEMS)
- Financial Management Business Transformation (FMBT)
- Fair Debt: Veteran Debt Processing Enhancements
- HR Shared Services
- Enterprise HR·Smart Enhancements
- Enterprise Talent Development
- VA Emergency Alerting and Accountability System (EAAS)
- eDiscovery
- Government Accountability Office (GAO) Module

Future Environment

VA envisions the Corporate Services

Portfolio as an *integrated service* delivery platform that places the Veteran or employee at the center. Integrated systems will enable cost savings, operational efficiency, and improved access to benefits and services. This will ultimately strengthen the Department's ability

to provide care and services to

Veterans and enhance CX.

VA will employ, and promote further adoption of, shared services within the Corporate Services Portfolio while considering and aligning to the Department's evolving priorities in a fiscally constrained environment.

In addition to shared services, the Department will use *COTS* and government off-the-shelf (GOTS) solutions to provide a modernized experience across functional areas. These solutions will allow VA to replace outdated legacy systems and comply with federal requirements.



Corporate Services: Acquisition and Property Management

Current Environment

Drivers

Transformative Initiatives

Future Environment

The current environment of the Acquisition and Property
Management Product Line consists of a majority of COTS legacy products, some of which are over 30 years old. These products feature hardware and software that are devoid of the flexibility to readily adapt to the necessary upgrades to improve user experience.

VA will ultimately decommission the preponderance of products within the Acquisition and Property Management Product Line and replace their capabilities via Financial Management and Business Transformation's (FMBT) implementation of iFAMS and other systems providing core property management capabilities.

This is because it is paramount to link financial systems with acquisition systems to effectively manage the entire acquisition lifecycle. However, there are legacy applications within the Product Line that will remain in service after FMBT and require long-term sustainment and modernization.

The VA Office of Inspector General (OIG) has recommended that the CIO implement a policy to ensure cost-effective utilization of IT equipment, installed software, and services and ensure coordination of acquisitions with affected VA organizations. This will help ensure that VA's operating framework and organizational needs are considered prior to acquisitions.

Additionally, the Deputy Secretary of VA is mandated to maintain a listing of VA-certified Veteran-Owned Small Businesses (VOSBs).

The VA Office of Small and Disadvantaged Business Utilization is responsible for enabling the Deputy Secretary to meet this mandate, and its related proprietary system is expensive to operate and maintain.

Other drivers influencing the Product Line include decommissioning legacy systems in preparation for FMBT and managing contracts in compliance within the Federal Acquisition Regulation (FAR) in a timely and cost-efficient manner.

- Knowledge Management
 System: A central point of
 access for end-to-end
 acquisition lifecycle information
 and resources to empower VA's
 acquisition workforce, resolve
 inefficiencies, and improve
 effectiveness of procurement
 spending in several areas
- Veterans Enterprise
 Management System (VEMS):
 A COTS product that provides
 the means to accept Veteran
 applications for certification as
 a VOSB, adjudicate applications,
 and maintain a listing of VOSBs
 and Service-Disabled Veteran Owned Businesses (SDVOSBs)
- Electronic Contract
 Management System (eCMS):
 A portfolio of systems
 consisting of GOTS and COTS
 solutions that provides tools
 and functionality to manage
 contracts in compliance with
 the FAR, the VA Acquisition
 Regulation, and VA acquisition
 best practices

The Product Line will manage all enterprise application development activities as well as formulate strategy and technical direction, guidance, and policy to ensure that IT resources are acquired and managed for VA in a manner that adheres to various federal laws and regulations.

By supporting a small number of highly reliable, flexible, and comprehensive target systems that continuously evolve to support new requirements, the Product Line will be better poised to manage products throughout their lifecycle.

By migrating to a DevSecOps environment, VA will be better positioned to integrate its finance and acquisition systems, which will enable the Department to better manage the entire acquisition lifecycle. The Product Line will enhance its vision by incorporating agile practices and human-centered design and will identify interdependencies among systems, allowing for greater advancement in modernization.



ACQUISTION AND PROPERTY MANAGEMENT MILESTONES*

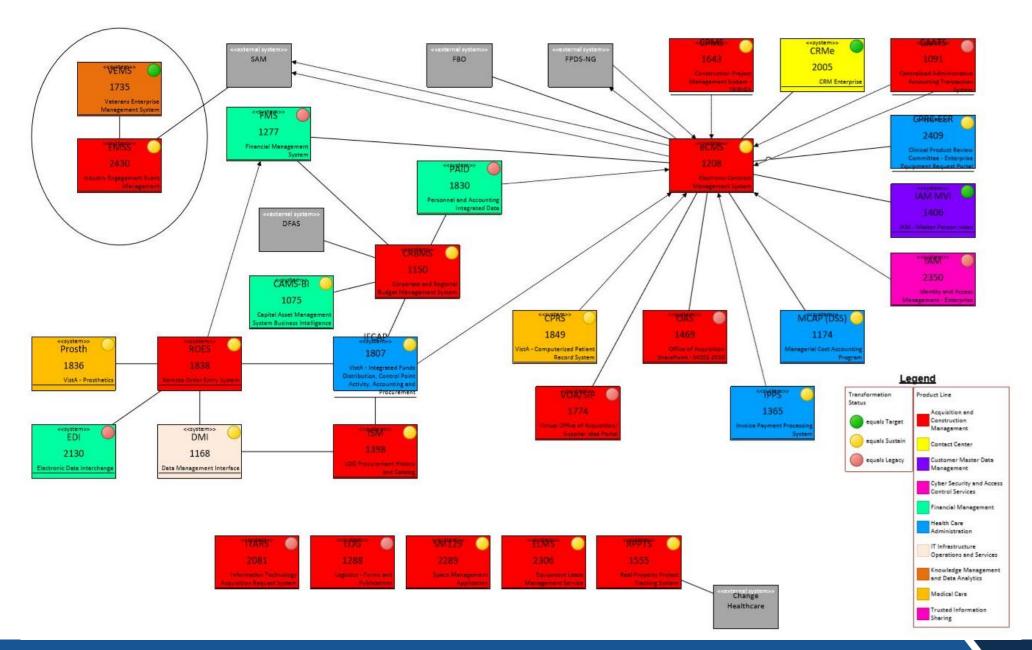
F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1:Deploy Knowledge Management System – IOC	Q1: Deploy VEMS to provide forecasting capabilities – FOC	Q1: Deploy FAMS Acquisition Module for NCA	Q2: Deploy iFAMS Acquisition Module for TAC and OIG		Q1: Deploy iFAMS Acquisition Module for Staff Offices	Q4: Deploy iFAMS Acquisition Module for the first VHA Regional Procurement Office
Q1: Deploy VEMS Risk Assessment Tool			Q2: Deploy iFAMS Acquisition Module for CFM: Major Construction		Q2: Deploy iFAMS Acquisition Module for VBA	
Q1: Complete Analysis of Alternatives (AoA) for Modemization of VA Forecasting Opportunities Tool						
Q1: Sustain eCMS						
Q2: Implement DevSecOps environment for VEMS						_
Q2: Deploy Knowledge Management System – FOC						
Q3: Complete VEMS migration to Microsoft Dynamics 365						
Q3: Decommission Virtual Office of Acquisitions within eCMS					/	
Q4: Migrate VEMS to Microsoft SharePoint Online						
Q4: Complete integration between eCMS and iFAMS for NCA Go-Live						
					WSION: The completion of Acque Management milestone	iisition and Property
					overcome operational in legacy systems and im	isks associated with prove the management
					of application developr	nentactivities.



Systems View of the Acquisition and Property Management Product Line





Corporate Services: Financial Management

Current Environment

Drivers

Transformative Initiatives > Future Environment

VA's financial management systems do not substantially comply with the federal financial management system requirements and the U.S. Government Standard General Ledger at the transaction level. Its current financial system, the Financial Management System (FMS), has over 100 primary interfaces with legacy systems, and its hardware and software are no longer updatable. The legacy software inhibits VA from fixing audit issues, including security and privacy concerns.

VA has cancelled two major efforts to replace FMS since 1999. Prior to VA's FMBT program, the Department's last attempt to implement a new financial system ended in 2010. This has led to a proliferation of FMS enhancements and workarounds and the development of add-on systems, resulting in a fragmented financial management environment. To replace FMS, the FMBT program is implementing iFAMS as VA's modern financial and acquisition management system.

Similarly, Veteran debt processing at VA is outdated and fragmented. The Department currently sends VA debt letters via paper copy and stores them in multiple systems of record to include VVA, VBMS, and VistA. Therefore, VA is working toward implementing a holistic solution to enhance Veteran debt processing.

VA's legacy financial management system is over 30 years old, and it becomes more challenging to technically and functionally support these legacy applications each year. VA is unable to meet federal financial regulations and mandates, including the Digital Accountability and Transparency Act of 2014 (DATA Act), due to its inability to update legacy code and the lack of integration between the legacy finance and acquisition systems.

Additionally, *OMB Memorandum 13-08, Improving Financial Systems through Shared Services*, directs all executive agencies to use a shared services solution for future modernizations of core accounting or mixed systems. In 2016, VA chose the U.S. Department of Agriculture (USDA) as its Federal Shared Service Provider (FSSP) to guide its migration to an integrated solution. However, in 2017, USDA officially notified VA that it would no longer serve as an FSSP in support of FMBT, prompting VA to solely manage the program.

Legislation driving Veteran debt processing enhancements includes the Veterans Benefits and Transition Act of 2018 and the Economic Growth, Regulatory Relief, and Consumer Protection Act. PMA CAP Goals 4 (Improving Customer Experience), 9 (Getting Payments Right), and 11 (Improve Management of Major Acquisitions) also drive VA's financial modernization.

- Financial Management Business
 Transformation (FMBT): Implementing
 iFAMS to replace FMS while using a
 tailored version of the Scaled Agile
 Framework for project management to
 deliver iFAMS functionality in small
 increments and coordinating with the
 implementation activities of the Cerner
 EHR and LogiCole
- Fair Debt Veteran Debt Processing Enhancements: Developing a plan to implement a holistic solution that will 1) track delays and disputes of Veteran debt, 2) notify Veterans of debt management legislative requirements via a common format, and 3) develop a medical database to provide community-care-related Veteran debt to Credit Reporting Agencies in order to address legislative requirements and issues related to debts incurred by Veterans

rompliant, Cloud-hosted financial and acquisition management solution with transformative business processes and capabilities. iFAMS will interface with the Cerner EHR and LogiCole to modernize VA's financial and acquisition management systems, and it will implement remediation actions related to repeated material weaknesses and compliance findings reported in VA's Agency Financial Report.

The system will *increase the transparency, accuracy, and reliability of financial information across VA*. This will result in improved fiscal accountability to American taxpayers and strengthen the Department's ability to provide care and services to Veterans.

Regarding Veteran debt processing, VA will provide timely notification to debtors such as Veterans and their families, make debt letters available online, and allow Veterans and beneficiaries the ability to opt-in to receiving correspondence electronically. It will also provide greater awareness of the debt, including the original debt amount, remaining balance, and payments made. Credit Reporting Agencies will be able to verify whether a debt furnished to them is a Veteran's medical debt, and VA will be able to submit a notice to Veterans when the Department has assumed liability for all or part of their medical debt.

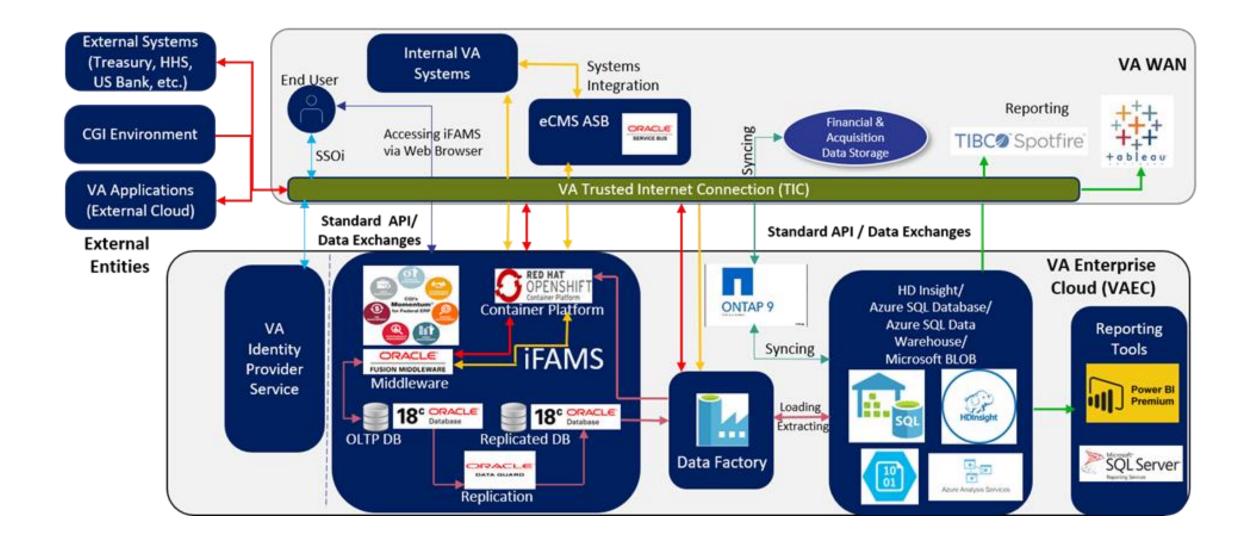
F Y 2020-F Y 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q2: FMBT NCA - GS - Value Stream	Q1: FSC Readiness - Integrated Technology - Enhance iF AMS IT Services	Q3: VBA Loan Guaranty Go- Live Q4: Staff Offices Revolving	Q2: iFAMS-LogiCole Integration Go-Live		Q1: VHA – VHA Central Office (includes HRC and Member Services) Go-Live	Q1: VHA – VISN 8 (FCCPAC) Go- Live
Q2: FMBT NCA - BF2E - Value Stream	Q1: FSC Readiness - New Services Offerings	Funds (Franchise Fund, Supply Fund, & Pershing Hall) Go-Live	Q2: Staff Offices – OIT Go-Live		Q2: VBA – C&P, NCA Benefits, Education, and VR&E Go-Live	Q2: VHA – VISN 5, 7, & 6 (MACPAC) Go-Live
Q2: FMBT NCA - P2P - Value Stream	Q1: FMBT NCA - Training Complete		O2: Staff Offices – the Board, OIG, EHRM, SECVA, OGC, OM, HR&A/ OSP, OEI, OPIA, OCLA, VEO, & OAWP Go-Live		Q2: Deploy iFAMS Acquisition Module for VBA	Q3: VHA – VISN 1, 2, & 4 (NECPAC) Go-Live
Q2: FMBT NCA - B2C/RA Value Stream	Q1: FMBT NCA - CP4 Go/No Go		Q2: Staff Offices – OALC, Major/Minor Construction Go- Live		Q3: VHA – VISN 17, 16, & 9 (MSCPAC) Go-Live	Q4: VHA – VISN 12 & 10 (NCCPAC) Go-Live
Q2: FMBT NCA - Testing - Production Simulation	Q1: FMBT NCA - Go Live		Q2: Deploy iFAMS Acquisition Module for TAC and OIG			<u> </u>
Q2: FMBT NCA - Testing - IST	Q2: FSC Readiness: Adaptive Processes		Q2: Deploy iFAMS Acquisition Module CFM: Major Construction			
Q2: Initiate Fair Debt Initiative	Q2: FMBT NCA - OCM & Comms Complete		Q3: VBA Insurance Go-Live			<u> </u>
Q3: FMBT NCA - R2R - Value Stream	Q2: FMBT NCA - Hypercare Support Complete					<u> </u>
Q3: FMBT NCA - Testing - 508	Q2: FMBT VBA - Product Phase complete				<u> </u>	
Q3: FMBT NCA - Testing - UAT	Q2: FMBT VBA - CD2 Go/No Go Go-Live 1					_
Q3: Complete Scope Development of Fair Debt Initiative	Q2: FMBT VBA - Go-Live 1				VISION: The completion of Fina	ancial Management
Q4: FSC Readiness Target State Operating Model VBA-GOE	Q3: FMBT VBA - CD2 Go/No Go Go-Live 2				milestones will enable iFAMS as a federally o	
Q4: FMBT Interfaces - Value Stream	Q3: FMBT VBA - Go-Live 2				that increases transpa reliability of financial in	rency, accuracy, and
Q4: FMBT VBA - Test Plan & RTM	Q4: FMBT VBA - Closeout					
Q4: Complete Fair Debt Minimum Viable Product Requirements						



iFAMS High-Level Application and Data View





Corporate Services: Human Capital Management

Current Environment

Drivers

Transformative Initiatives > Future Environment

VA's HR IT environment consists of a set of applications that support the Department's human capital business functions. These applications exist on disparate platforms and vary in scope, size, complexity, and support mechanisms. Additionally, many of these business functions are supported by redundant systems across VA Administrations and Staff Offices.

The current HR environment leads to a significant cost associated with sustaining outdated functionality that uses different workflow and business processes. It causes inconsistent and often unreliable data standards and reporting methods as well as increased workload and decreased efficiency of VA's HR practitioners due to manual processes that require remediating data errors.

In order to address these challenges, Human Resources Information
Technology (HRIT) and the Office of Human Resources and Administration (HR&A) have numerous efforts underway including decommissioning PAID, transitioning to shared services with HR·Smart, replacing VA's current Personal Identity Verification (PIV) Card Management System and enterprise talent management solution, and enhancing the VA Emergency Alerting and Accountability System (EAAS).

VA's HR modernization efforts are driven by business imperatives from across the Department and external sources. Per its Strategic Plan, VA is modernizing its human capital management capabilities to empower and enable a diverse, fully staffed, and highly skilled workforce that consistently delivers world-class services to Veterans and their families.

In 2016, the U.S. Government
Accountability Office (GAO) identified
PAID as one of the 10 oldest systems in
use in the Federal Government. PAID has
supported many core HR functions for
more than 50 years and is antiquated,
expensive to maintain, and no longer
compliant with federal security
requirements.

Additionally, under the Homeland Security Presidential Directive 12 (HSPD-12), VA is required to issue PIV cards to its employees, contractors, and affiliates. Its current PIV Card System is nearing the end of its expected lifecycle and encountering technology issues that make it cost-prohibitive to further maintain and enhance.

PMA CAP Goal 3 (Workforce of the Future) and the MISSION Act also guide VA's transformation of its HR capabilities.

- HR Shared Services: Adopting and expanding shared services for HR functions via HR·Smart to realize cost savings and improve internal HR operations and data governance
- Enterprise HR-Smart
 Enhancements: Improving the
 capabilities of the HR-Smart system
 by adding manager and employee
 self-service, workers without
 compensation (WOC), and
 manpower functionalities
- Next Generation PIV (NextGen PIV):
 Replacing the current internal PIV
 Card System with the federal shared service USAccess PIV Card System provided by GSA to substantially improve identity management and security for VA
- Enterprise Talent Development:
 Implementing a new enterprise
 talent management solution to
 develop and sustain a highperforming workforce that meets
 VA's strategic and operational goals
 and objectives
- VA Emergency Alerting and Accountability System (EAAS): A FedRAMP certified SaaS notification system that enables reliable mass communication across a wide range of channels and devices

HRIT will modernize VA's HR systems to provide cost-effective, standardized, and interoperable HR solutions to support the strategic management of human capital. The Department will also develop HR data standards for efficient and reliable data exchange and leverage existing HR system capabilities to supply innovative core and non-core solutions between shared service resources.

VA will implement *a modern end-to-end system* designed to enter HR data one time and move that data in concert with employees through the HR lifecycle.

The HR transformative initiatives will enable VA to achieve a future environment in which HRIT operates seamlessly and efficiently to address the business needs of VA Administrations and Staff Offices. They will also enable cost savings, operational efficiency, enhanced customer service, and improved ability to manage the Human Capital Business Reference Model (HCBRM) functions.

In addition, HRIT envisions a future with a renewed focus on strong governance to accomplish its strategic objectives. Well-defined and executed governance will help VA *eliminate duplicate systems*, achieve end-to-end interoperability, and align systems to the HCBRM.



HUMAN CAPITAL MANAGEMENT MILESTONES*

FY 2020-FY 2026

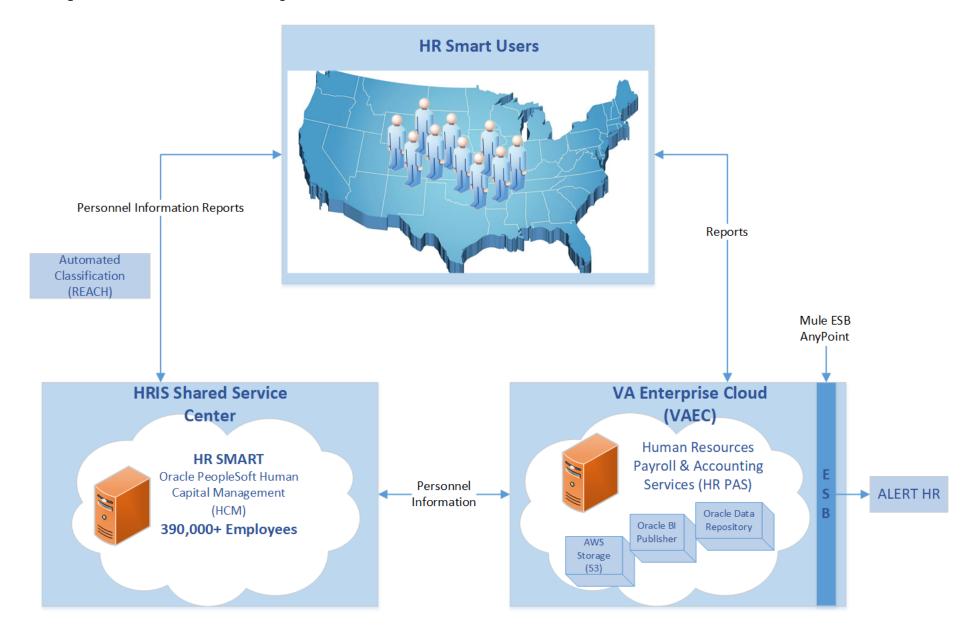


Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Design/Develop WOC Phase 1	Q1: Deploy Automated Classification Hub	Q1: Deploy WOC Phase 3 & 4	Q1: Design/Develop Talent Acquisition	Q1: Design/Develop Employee Benefits	Q1: Deploy Separation & Retirement	Q1: Sustain New Pay
Q1: Design/Develop Manpower Phase 1	Q1: Acquire/Design Employee Self Service Portal	Q1: Sustain Employee Self Service	Q1: Sustain VA EAAS	Q1: Sustain VA EAAS	Q1: Sustain Talent Development	Q1: Sustain VA EAAS
Q1: Deploy USAccess Phase 3	Q1: Deploy Data Cleanse	Q1: Sustain VA EAAS	Q2: Acquire New Pay Solution	Q3: Deploy Talent Development	21: Sustain VA EAAS	Q2: Sustain Employee Benefits
Q2: Deploy WOC Phase 1 Proof of Concept	Q1: Deploy WOC Phase 2 (HR·Smart)	Q2: Deploy SWIMS FOC	Q3: Deploy Talent Acquisition	Q4: Sustain Time and Attendance	Q2: Deploy Employee Benefits	
Q2: Deploy Manpower Phase 1	Q1: Complete USAccess badge issuance at pilot sites	Q2: Acquire Time and Attendance	Q3: Design/Develop New Pay Phase 1	Q4: Deploy Separation & Retirement	Q4: Sustain Separation and Retirement	
Q2: Deploy Phase 2 NextGen PIV	Q1: Begin Phase 3 deployment of USAccess equipment	Q2: Acquire Talent Acquisition	Q3: Pilot Test Talent Development	Q4: Sustain Talent Acquisition		
Q2: Deploy ALERT-HR FOC	Q2: Acquire WOC Phase 3 & 4 and deploy Manpower Phase 2 (HR·Smart)	Q3: Deploy WOC FOC	Q4: Acquire Employee Benefits			
Q2: Deploy FOC MSS (HR-Smart)	Q2: Deploy VA EAAS desktop pop-up & mobile app	Q3: Design/Develop Time and Attendance	Q4: Deploy Time and Attendance			
Q3: Acquire WOC Phase 2	Q2: Deploy Phased Roll-out Employee Self Service Portal	Q3: Acquire Separation and Retirement	Q4: Design/Develop Separation & Retirement Phase 2			
Q3: Acquire, Design, and Develop Manpower Phase 2	Q2: Complete PIV PKI certificate migration & deployment of all USAccess mobile equipment	Q3: Acquire Talent Development				
Q4: Design/Develop WOC Phase 2	Q2: Begin USAccess badge issuance to general population	Q4: Sustain WOC				
Q4: Acquire SWIMS & sustain ALERT-HR	Q3: Design/Develop WOC Phase 3 & 4 and SWIMS	Q4: Design/Develop Separation & Retirement Phase 1			MSION	
Q4: Design/Develop Enterprise Performance Management Title 5	Q3: Design/Develop Enterprise Performance Management Title 38	Q4: Sustain Enterprise Performance Management Title 5 & 38			VISION: The completion of Hum Management milestone	es will modernize VA's
Q4: Begin PIV PKI certificate migration	Q4: Deploy SWIMS IOC & Enterprise Performance Management Title 5	Q4: Sustain SWIMS			HR systems in order to standardized, and inter in support of the Depar	operable HR solutions
Q4: Begin USAccess badge issuance at 12 pilot sites	Q4: Deploy VA EAAS integration (VA Core Data & Birthright)	Q4: Retire legacy PIV system			personnel.	
	Q4: Begin legacy PIV system retirement					



HR and Payroll Future Operational Environment





Corporate Services: SecVA/Congressional/Legal Affairs

Current Environment

Drivers

Transformative Initiatives > Future Environment

The SCLA Product Line contains IT products to support the activities of the Office of the Secretary of VA, OGC, and the Office of Congressional and Legislative Affairs (OCLA). It also includes products to enable regulatory activities, such as matter intake and tracking under the Office of Accountability and Whistleblower Protection.

The Product Line currently consists of 14 products, including eDiscovery Clearwell, GAO Module, the White House VA Hotline case tracking system, the Veteran Status Query and Response Exchange System (SQUARES), and the VA Functional Organization Manual (FOM) System.

The Department is currently working to execute a technical refresh of eDiscovery Clearwell, as it is an insufficient legacy solution. OIT has also developed primary functionality for the GAO Module to aid in processing GAO inquiries, and the system is undergoing limited IOC production use and testing. Lastly, VA is enhancing both the White House VA Hotline system and SQUARES.

VA requires a reliable electronic discovery tool to comply with *the*Federal Rules of Civil Procedure
(FRCP); the VA Accountability and
Whistleblower Protection Act of 2017;
and VA Directive 0500.

The Department has determined that the tool it currently uses to support electronic discovery, eDiscovery Clearwell, is *inadequate to meet the purposes for which the tool is needed, subjecting VA to extremely high risk of legal sanctions* if it is unable to meet legal requirements related to electronic discovery.

Further driving SCLA modernization, the Department requires a modern system to process and effectively respond to GAO inquiries.

Drivers for the White House VA Hotline include *expanded functionality to meet user requirements as well as the coronavirus pandemic*. Due to its purpose as the main gateway for Veteran inquiries, the White House VA Hotline is under expansion to handle a significant increase in call volume during the coronavirus pandemic.

- eDiscovery: An effective system to manage Electronically Stored Information that will replace the current eDiscovery Clearwell tool and be capable of holding more data, have better processing capabilities, and provide an easy-to-use user interface
- GAO Module: A Salesforce-based document, meeting, and workflow management system used to manage VA's responses to GAO inquires
- White House VA Hotline:
 Enhancing the Salesforce system that agents use in VA call centers to log issues and inquiries from Veterans and provide resolutions so that it integrates with the Master Person Index Enhanced (MPI-e) and has upgraded computer-telephony integration
- Veteran Status Query and Response Exchange System (SQUARES): An enhanced version of the application that enables service providers to retrieve information about Veteran status and eligibility for homeless programs

The re-platformed eDiscovery solution will supply VA with the ability to provide data requested by Federal courts, Congress, and others in a timely manner. This will drastically reduce the risk that VA is subject to serious legal sanctions and will increase Veteran trust in VA services.

OCLA and other program offices will be able to utilize the GAO Module at FOC to ensure that VA's responses to GAO inquiries are effective and timely. This will assist VA in maintaining transparency in how taxpayer dollars are spent and providing accurate information to GAO in its aim to help the government save money and work more efficiently.

The White House VA Hotline will be equipped with expanded capacities and capabilities so that agents can seamlessly assist customers with VA programs and services.

Furthermore, Veterans will be able to more easily access homeless services and programs, as internal and external service providers are able to quickly access reliable data on Veteran status, homeless program eligibility, and VHA eligibility via SQUARES.



SECVA/CONGRESSIONAL/LEGAL AFFAIRS MILESTONES*

FY 2020-FY 2026

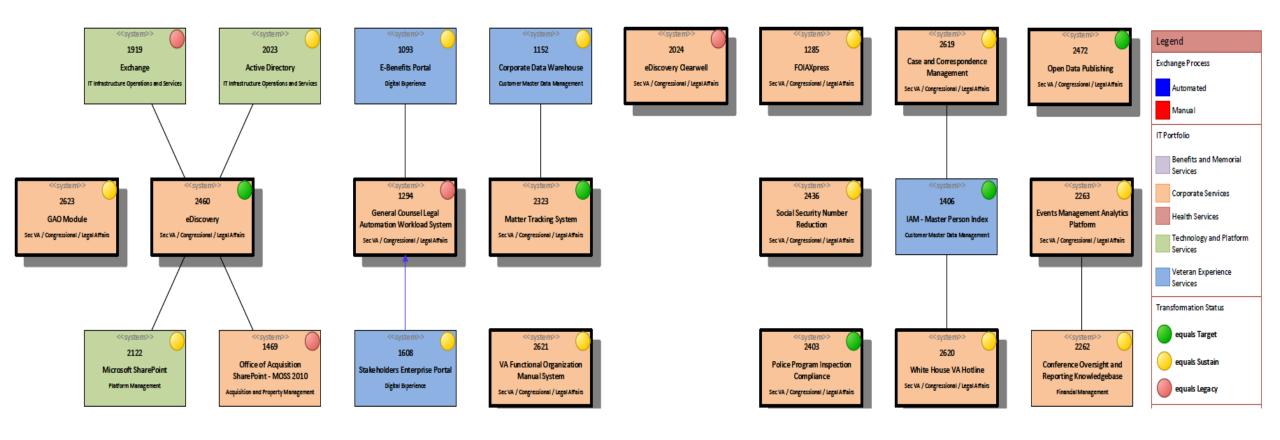
FundedUnfunded/

Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Deploy FOM minimum viable product	Q2: Complete acquisition of eDiscovery	Q2: Deploy IOC of replatformed eDiscovery solution	Q3: Decommission legacy eDiscovery Clearwell solution			
Q1: Deploy GAO Module minimum viable product		Q4: Complete deployment of re- platformed eDiscovery solution				
Q1: Deploy updated knowledge base functionality within SQUARES 2.0						
Q2: Complete eDiscovery Analysis of Alternatives						
Q2: Deploy updated FOM training materials						
Q2: Decommission SQUARES 1.0						
Q2: Complete White House VA Hotline (WHHL) and PATS-R integration						
Q2: Deploy GAO Module – FOC						
Q3: Deploy custom code enhancements within FOM						
Q3: Deploy help desk case setup and routing function within SQUARES 2.0						
Q3: Complete WHHL and MPI-e integration					VISION:	
Q3: Complete WHHL and CTI integration					The completion of SecVA Legal Affairs milestones w	vill enable VA to
Q4: Complete planning for eDiscovery re-platforming					effectively organize, main communications both inte by leveraging a modern, of platform.	rnally and externally



Systems View of the SCLA Product Line





Example 2 Technology and Platform Services Portfolio Overview

Current Environment

Drivers

Transformative Initiatives **Future Environment**

The Technology and Platform Services Portfolio maintains a robust technology infrastructure for the Department to enable the business Portfolios to deliver care and other services to Veterans.

VA's technology environment consists of applications with a dedicated infrastructure and a project-centric IT service delivery model.

Although the current IT environment is *characterized by* the need for infrastructure improvements coupled with a collection of legacy and modern technologies, VA has made progress in the direction of its future technology environment.

VA's complex and fragmented technology environment affects the CX of 10 million users.

The Department must modernize legacy infrastructure and *leverage Cloud technologies* to alleviate technical debt, enable interoperability, and ultimately improve customer service and delivery of care. FITARA, the Data Center Optimization Initiative (DCOI). and federal Cloud computing policy guide VA in areas of this effort.

Additionally, VA's Enterprise Cybersecurity Strategy (ECSS) findings from GAO and OIG, and federal and VA data security **standards** direct the Department in safeguarding its infrastructure, systems, and data.

The PMA and the MISSION Act also drive modernization within the Portfolio.

- **Networx Transition**
- Data Center Consolidation Initiative (DCCI)
- .gov Cybersecurity Architecture Review (.govCAR) Program
- **Identity and Access** Management (IAM)
- **Veterans Data Integration** and Federation Enterprise Platform (VDIF-EP)
- Lighthouse: VA's API Management Platform
- Hosting and Provisioning (Integrated Architecture Multi-Cloud Strategies)
- VA Enterprise Cloud (VAEC)

The Technology and Platform Services Portfolio will supply efficient and modern telecommunications and *infrastructure technologies* that are capable of integrating with newly adopted solutions.

VA will achieve *highly reliable* and available infrastructure to develop and host Cloud services and applications across the Department. Data standardization and synchronization will enable seamless information sharing and reuse for collaboration and research.

Additionally, the Department will continue to evolve its Enterprise Cybersecurity Program (ECSP) to protect Veteran information and VA data, systems, and infrastructure as well as maintain a cyberspace ecosystem that is resilient to threats.



Example 1 Technology and Platform Services: IT Infrastructure Operations and Services

Current Environment

Drivers

Transformative Initiatives **Future Environment**

The cost of enhancing and maintaining VA's operational systems hosted on large and complex on-premise infrastructure is growing at a rate one would expect of the largest health care system in the U.S. *Current sustainment*, operations, and maintenance costs comprise more than 80% of VA's IT spend and are increasing.

Consequently, there is *insufficient* funding for new investment in development and modernization. Prioritization of expenditures at times generates uncommonly high return on investment but leaves portions of the infrastructure close to or past manufacturer end-of-sale dates and in some cases past the manufacturer's recommended end-of-life. Older desktops and laptops and exponential storage growth contribute to an unbalanced state of technical debt.

VA is taking steps to refresh and update hardware and software at VA facilities. The Department is initiating procedures to migrate legacy solutions to modern, unmodified SaaS solutions and is *significantly reducing the* number of physical data centers through consolidation or through migration to the Cloud.

As the integrated framework upon which its digital services operate, IT infrastructure is critical to VA's foundation. As VA integrates new solutions and services into enterprise operations, such as EHRM, it is also *modernizing its infrastructure* to meet architecture, design, and operational standards to support additional resource requirements.

However, due to insufficient funding, technical debt inhibits the Department's ability to optimize and transform and will impede innovation and agility as well as hinder VA's ability to deliver improved experience and Veteran-centric services in a timely, reliable, and consistent manner.

Additionally, as part of an ongoing effort to consolidate and optimize agencies' data centers, OMB released Memorandum M-19-19 extending DCOI through the end of FY 2020 and established an updated DCOI policy. M-19-19 shifts agencies' focus toward consolidating "general compute" data centers rather than special purpose data centers.

New IT systems and bandwidth needs (e.g., expansion for telehealth) are also driving infrastructure upgrades.

- **Networx Transition:** Transitioning to a flexible platform to support agency migrations to modern telecommunications and IT service offerings
- **Telephony Modernization:** Modernizing telephony technology to improve VA's ability to provision new services and reduce maintenance contract costs
- **Enterprise Service Desk Managed Service Provider:** Transitioning to a managed service provider to create and maintain an effective IT service delivery environment that manages customers' end-to-end services
- **Server and Storage Farm:** Shifting to on-demand managed service capabilities to provide rapid delivery of infrastructure, operational support, and lifecycle management
- Data Center Consolidation Initiative (DCCI): Identifying the services, tools, applications, and systems that are hosted in data centers and coordinating with their owners to transition them to the Cloud or consolidate them wherever possible

IT infrastructure modernization will increase capabilities to better respond to the needs of Veterans, business partners, employees, rapidly changing technology, and new modes of business delivery. VA will provide efficient and modern telecommunications and infrastructure technologies with enhanced hardware and software capable of integrating with newly adopted solutions.

OIT will also transition from a capital expenditure model to an operating expenditure model. This will expedite modernized infrastructure, provide greater scalability, reduce service and technical debt, and improve IT service delivery.

Furthermore, VA's fully deployed hybrid Cloud environment will evolve over time to increase efficiency and dynamics with improved wireless and mobile connectivity. Accordingly, its digitally transformed IT infrastructure will expand the opportunities to capitalize on Cloud computing and reduced cost of operations. As OIT accomplishes its main Cloud computing objectives, VA architecture will become readily capable of leveraging managed services, allowing VA to reduce and control costs, increase efficiency, and provide scalability.

IT INFRASTRUCTURE OPERATIONS AND SERVICES MILESTONES*

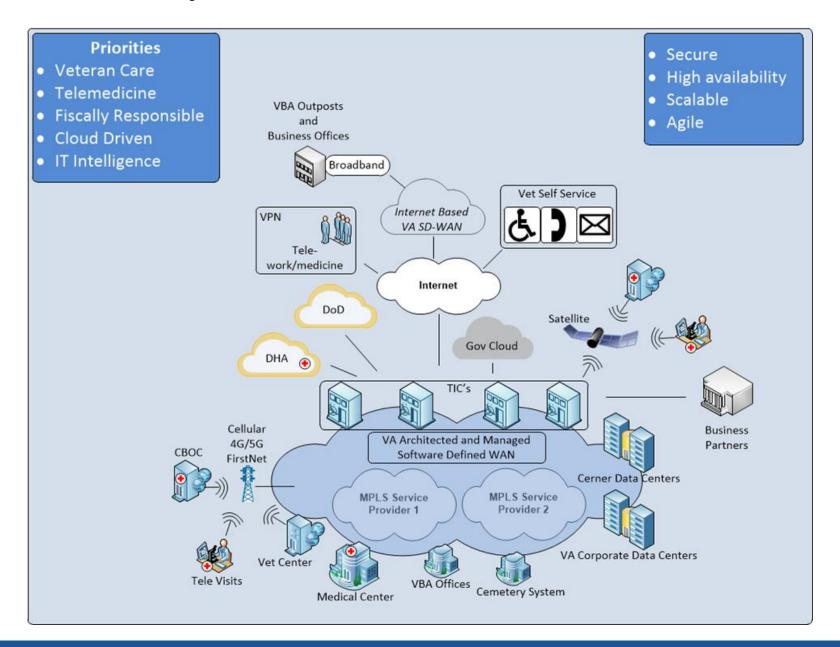
FY 2020-FY 2026



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Initiate infrastructure refresh of 20% of VA's hardware on annual basis beginning with the end-of-life hardware	Q1: Deploy new modemization strategy and plan	Q4: Implement telephony modernization Phase 4 for 33% of VAMCs and remote sites with legacy systems	Q1: Develop VA infrastructure strategy and plan	Q3: Improve infrastructure effectiveness and efficiency based on Veteran service requirements	Q1: Re-initiate infrastructure refresh of VA's hardware beginning with the first 20%	
Q1: Complete DCCI Phase 1 data center consolidations	Q1: Achieve FOC for VAEC	Q4: Complete refresh of nex t 20% of VA hardware (60% complete)	Q1: Complete DCCI Phase 3 data center consolidations	Q4: Complete Telephony Modernization Phase 4 for 100% of VAMCs and remote sites with legacy systems	Q1: Develop future infrastructure strategy and plan based on evolved Veteran service objectives	
Q2: Initiate transition of end-of-life Voice Systems to ECSC	Q2: Establish hosting modernization enterprise containerization capability	Q4: Continue DCCI data center consolidations of 4 data centers	Q3: Complete migration of Networx , WITS 3, and RLS contracts	Q4: Complete refresh of next 20% of hardware (100% complete)	Q2: Implement new infrastructure technologies and management capabilities enterprise wide	_
Q3: Award contract for remaining Telephony Modernization Phase 2 sites	Q4: Complete implementation of telephony modemization Phase 2 and 3 for 46 VAMCs and remote sites		Q4: Improve infrastructure capabilities & performance across VA environment third-party services	Q4: Complete DCCI center consolidations	Q4: Complete infrastructure refresh of 20% of VA's hardware	
Q4: Initiate implementation of Telephony Modemization Phase 2 and 3 for 46 VAMCs and remote sites	Q4: Complete infrastructure refresh of the next 20% of VA hardware (40% complete)		Q4: Implement Telephony Modemization Phase 4 for 66% of VAMCs and remote sites with legacy systems	Q4: Complete migration of 350 applications from third-party and on-premise data centers to VAEC in coordination with the business and DCOI		
Q4: Complete infrastructure refresh of the first 20% of VA's hardware	Q4: Continue DCCI data center consolidations of 8 data centers		Q4: Complete refresh of nex t 20% of VA hardware (80% complete)			
Q4: Implement VISN Telephony Solution			Q4: Continue DCCI data center consolidations			
Q4: Install servers and routers at 24 locations to support Telephony Modemization Phase 2						
Q4: Finalize the closure of 16 data centers under the DCCI mandate					and Services milestone telecommunications ar infrastructure technolo VA's capabilities to be	nd efficient gies that will increase tter respond to the
					needs of Veterans and	d employees.



Proposed Future Enterprise Network and Infrastructure





Example 2 Technology and Platform Services: Cybersecurity and Access Control Services

Current Environment

Drivers

Future Environment

VA's Office of Information Security (OIS) established ECSP to manage VA's cybersecurity activities and projects and achieve strategic information security qoals. ECSP enables VA to make effective cyber risk-based decisions by establishing a governance structure that combines OIT leadership and other stakeholders who are both internal and external to VA.

Under ECSP, VA is monitoring remediation efforts and compensating controls to address Material Weakness #4 in the FY 2019 Agency Financial Report (Information Technology Security Controls) through cybersecurity project prioritization, planning, and execution.

Regarding Access Control Services, the Office of Identity, Credential, and Access Management builds the business requirements as well as the strategic plan and roadmap for *establishment of* enterprise solutions to: manage the identity lifecycle, manage the onboarding and offboarding of VA users to the VA network, and support logical/physical access in coordination with OIT's development, implementation, and operation of Identity and Access Management (IAM) systems and services.

IAM provides enterprise-level identity and easy access for all VA persons of interest to the appropriate systems, supporting each at the appropriate levels across the enterprise and providing multiple credentialing choices.

The ECSS sets the direction of ECSP for forward-looking cybersecurity risk-based decision making to protect Veterans' information. VA requires a wellcommunicated cybersecurity strategy such as the ECSS given the size and complexity of the organization's cybersecurity environment.

The ECSS is executed in close collaboration with key business stakeholders both within and outside of VA (i.e., with GAO and OIG). ECSP uses metrics derived from the ECSS, findings from GAO reports, and OIG audits to prioritize the activities of the ECSP Cybersecurity Projects.

Additionally, the centralized, enterprisewide identity and access management provided by IAM eliminates previously duplicative efforts created and maintained by dozens of stove-piped LoB systems and enables the VA LoBs to focus on providing services and benefits to Veterans and other VA customers.

Enterprise-level management of these services provides more consistent and increased data quality, as well as high availability, and ensures compliance with federal and VA data security standards.

Data Loss Prevention (DLP) Program: An end-to-end program reducing the risk of sensitive data leakage and enabling policy-compliant use of sensitive data across approved traditional, mobile, and Cloud environments as well as authorized networks, repositories, and devices

Transformative Initiatives

- .gov Cybersecurity Architecture Review (.govCAR) Program: A threatbased cybersecurity assessment (based on the DHS assessment methodology) that identifies gaps, weaknesses, and redundancies in VA's threat coverage by analyzing security capabilities through an adversarial
- **Information Security Continuous** Monitoring (ISCM)/Continuous **Diagnostics and Mitigation (CDM):** Implementing ISCM and CDM programs to provide increased visibility into VA's cybersecurity posture by identifying assets on VA's network, monitoring user activity, and viewing network traffic to protect against potentially malicious activity
- **Identity and Access Management** (IAM): VA's enterprise shared service (ESS) for user authentication that coordinates secure access to VA resources for both internal and external users

ECSP's robust governance framework and processes support VA's incorporation of future technology and emerging requirements, fulfillment of strategic goals, and mitigation of future cybersecurity challenges.

ECSP provides the structure for cybersecurity projects to *implement innovative solutions* to automate workflows, augment cybersecurity posture, and streamline processes. The various components of ECSP drive VA towards its target future environment by continuing to mature VA's cybersecurity posture, cybersecurity intelligence capabilities, and cybersecurity culture. ECSP's implementation plans also refer to the detailed actions required to fully address material weakness findings.

In addition, IAM will continue to evolve and integrate with the organizations and systems with which VA interacts, such as DoD, to ensure that all VA persons of interest and system users are seamlessly and accurately managed.

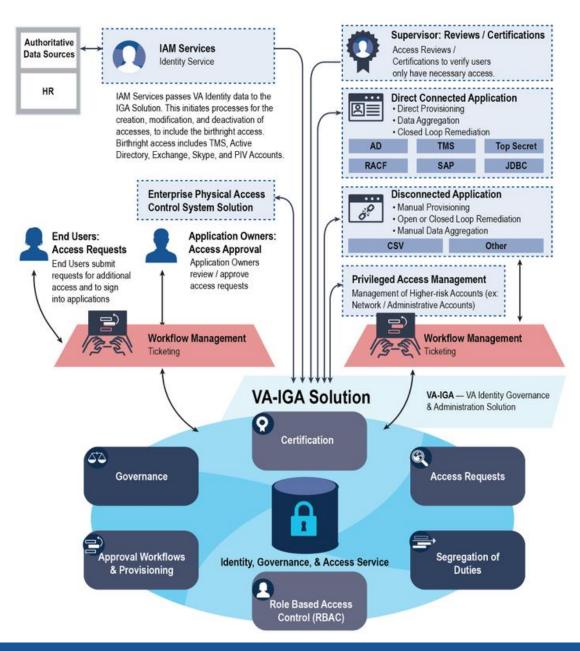
To augment IAM services, VA will implement a robust Identity Governance and Administration (IGA) solution to manage digital identity and access rights across multiple systems. The IGA solution will act as a centralized repository to manage the complete lifecycle of user access from initial request, approval, and provision of access to timely removal of access.

F Y 2020-F Y 2026



	<u> </u>					
FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q2: Deploy Employee Onboarding enhancements to IAM	Q1: Deploy EHRM/Cerner integrations with IAM – IOC	Q1: Deploy enhancements to support MVI as authoritative source of demographic data	Q1: Deploy enhancements to support MVI as authoritative source of demographic data	Q1: Upgrade MVI matching algorithm	Q1: Deploy MVI TK enhancements to resolve VA person types	
Q2: Integrate SSOi and SSOe login/log-in functionality within Cemer EHR – EHRM IOC	Q2: Deploy EHRM/Cemer account provisioning/de-provisioning in IAM – Wave A	Q1: Deploy EHRM/Cemer integrations with IAM – Wave E	Q2: Deploy MVI TK enhancements to resolve VA person types	Q2: Deploy MVI TK enhancements to resolve VA person types	Q2: Deploy ePACS enhancements - Phase 3	
Q2: Integrate IAM file-based provisioning capability to add and update Cemer users	Q3: Integrate IAM with iFAMS with VBA & NCA	Q1: Integrate IAM with the Physical Access Control System (ePACS)	Q2: Deploy EHRM/Cemer integrations with IAM – Wave I	Q2: Deploy EHRM/Cemer integrations with IAM – Wave J	Q4: Deploy EHRM/Cemer integrations with IAM – Wave K	
Q2: Add the National Provider Identifier as a IAM data element to the user record to support EHRM	Q3: Deploy functionality to store, update, and view person sensitivity levels in IAM	Q1: Deploy capability for the IAM MVI to be the single authoritative source for Social Security number verification	Q2: Deploy ePACS enhancements – Phase 1	Q2: Deploy ePACS enhancements - Phase 2	Q4: Deploy IAM enhancements to support date of death data quality issues	
Q2: Integrate Identity Services that enable EHRM to add patients to Cemer and provide corresponding person identifiers of non-Cemer systems for use in patient care	Q3: Integrate IAM provisioning with VBA Common Security Services	Q2: Deploy MVI messaging infrastructure to support new HL7 FHIR standard	Q3: Deploy IAM enhancements to support date of death data quality issues	Q2: Deploy IAM enhancements to support date of death data quality issues	Q4: Deploy EVVE subscription enhancements	
Q2: Deploy Caregiver ID capability in IAM in support of the MISSION and Patronage Acts	Q3: Deploy EHRM/Cerner account provisioning/de-provisioning in IAM – Wave B	Q2: Deploy MVI TK enhancements to resolve VA person types	Q4: Deploy EVVE subscription enhancements	Q3: Deploy EVVE subscription enhancements	Q4: Deploy IAM enterprise roles	
Q2: Integrate SSOe with VA.gov	Q4: Deploy Electronic Verification of Vital Events (EVVE) subscription in IAM	Q2: Deploy EHRM/Cemer integrations with IAM – Wave F	Q4: Integrate IAM provisioning with Service-Oriented Architecture Research and Development/Max imo	Q4: Complete IAM analysis of enterprise roles		
Q2: Integrate two-factor authentication with legacy VBA applications	Q4: Deploy MVI TK proofing process to support Identity Trait changes	Q3: Upgrade MVI matching algorithm	Q4: Complete integration of enterprise provisioning with 33% of each LoBs' applications	Q4: Complete onboarding for all enterprise user types		
Q2: Deploy functionality to store, update, and view all person types in IAM	Q4: Deploy EHRM/Cemer account provisioning/de-provisioning in IAM – Wave C and D	Q3: Deploy EHRM/Cemer integrations with IAM – Wave G			VISION: The completion of Cyber Control milestones will er implement emerging tech	nable VA to
Q3: Integrate Login.gov as a credential service provider in IAM		Q4: Deploy EHRM/Cemer integrations with IAM – Wave H			strategic goals, and mitigate cybersecurity and identify	ate future
Q4: Integrate IAM with iFAMS with VHA		Q4: Deploy EVVE subscription enhancements			management challenges.	
Q4: Deploy SSO enhancements to support the Digital Veteran Platform and HealthShare Enterprise Platform		Q4: Deploy non-person entity (service to service) enterprise authentication services				

Example 2 Conceptual Future Environment of IGA Solution





Technology and Platform Services: Trusted Information Sharing

Current Environment

Drivers

Future Environment

Since the establishment of the Department, VA has experienced challenges in achieving interoperability. Disparate modernization initiatives and lack of a stable enterprise interoperability strategy have led to nonstandard user interfaces, data exchanges, and performance monitoring as well as security challenges.

VA collects and stores information from multiple channels, LoBs, systems, and applications. Due to the numerous sources of information, the Department has faced significant challenges in establishing a standard or common understanding of maintaining information for uniformity. Additionally, information sharing and reuse is limited at VA.

VA has invested significant resources to improve interoperability and data standardization. Along with other modernization efforts, the Veterans Health Information Exchange and Joint Legacy Viewer have improved VA's interoperability capabilities. The Department's API Management Platform, Lighthouse, is also improving interoperability. VA's venture into public-facing apps is powered by Lighthouse, which enables vendors to directly link new technologies to internal VA data.

Health care data interoperability plays a key role in all four of VA's Priorities. Interoperability between VA and DoD specifically is the lynchpin for EHRM, VA's highest-profile IT modernization initiative in its history.

Interoperability is necessary to ensure a patient-centric health care experience, improved delivery of services, and a seamless care transition. However, interoperability among IT systems is a recurring challenge that has proved difficult to resolve despite the development of data exchange protocols, standards, and platforms. The lack of a single VA environment for data interoperability and exchange limits the ability to share and understand information in a common manner.

Furthermore, legislative and regulatory actions have addressed the need to improve interoperability and increase health data sharing: the 21st Century Cures Act; the Office of the National Coordinator for Health Information Technology's (ONC) approach to information blocking, APIs, and FHIR **standards** for interoperability; and ONC's draft Trusted Exchange Framework and Common Agreement rule.

 Veterans Data Integration and Federation Enterprise Platform (VDIF-EP): A standards-based, health care IT integration platform that will federate VA patient data, support the migration of patient data from VistA to the Cerner EHR, and facilitate HIE within VA and with external partners

Transformative Initiatives

- Data Access Services (DAS): A system of enterprise middleware services that enables intra- and inter-agency data transport, transformation, and storage of Veterans' health, benefits, or administrative data between data producers and data consumers
- Lighthouse: VA's API Management Platform that employs an opensource API gateway platform on a private VA Cloud to connect data from many sources and enable both internal and third-party developers to build better patient experiences for Veterans and their families

VA will establish a Trusted Information Sharing framework with information standardization and interoperability capabilities, fostering innovation and improving its ability to exchange data internally and externally with business partners. Communication with interoperability platforms is crucial to ensuring that compatibility and integration is possible. Therefore, as VA Profile integrates different data types from data sources, the Department will develop links and interfaces to connect the interoperability platforms.

VDIF-EP will improve enterprise access to all VistA-based health and non-health data and enable seamless communication between all points of care. Synchronized data will support EHRM and enable health care research as well as quality and performance management and reporting.

Lighthouse will establish a universal health language with external partner systems that will use APIs and ESS to exchange, process, and present *information*. VA will consume and reuse APIs across the ecosystem, allowing OIT to more rapidly deliver new technology and services. Veterans will be able to manage their own health experience within a secure and interoperable environment.

TRUSTED INFORMATION SHARING MILESTONES*

FY 2020-FY 2026

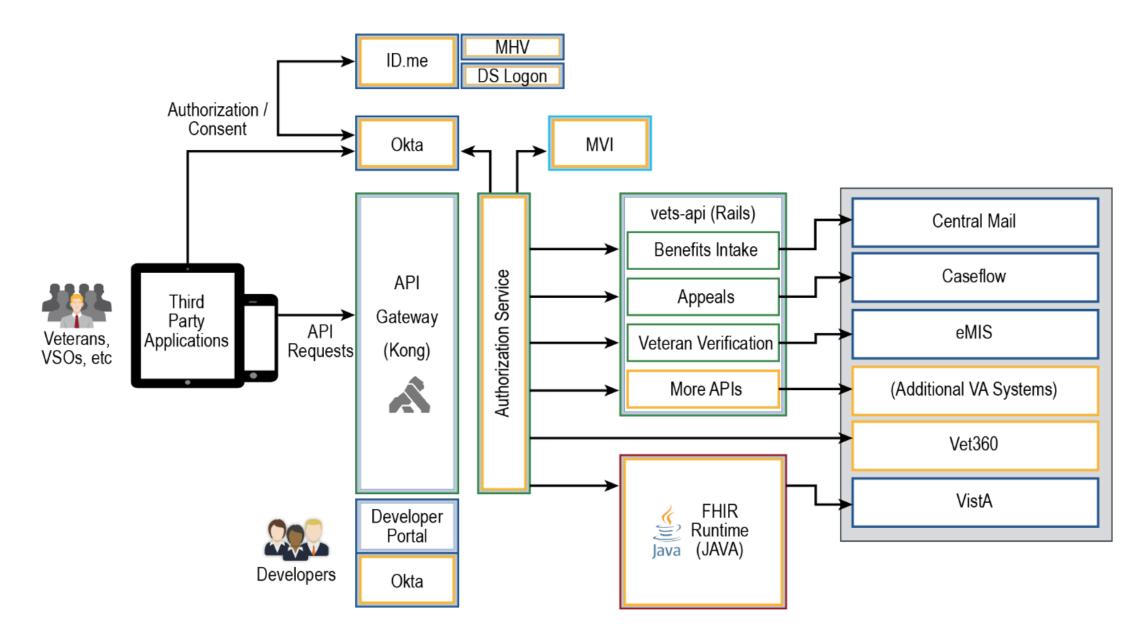
✓ Funded

>> Unfunded/ Pre-decisional

FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Complete interim HealthShare- Cemer hybrid HIE						
Q2: Initiate transition from interim hybrid HIE to Cerner HIE						
Q3: Launch LGY APIs for internal consumer						
Q3: Launch Appeals APIs for VA.gov						
Q3: Add USAJobs.gov as a consumer of the Veteran Verification API						
					VISION: The completion of Truste	ed Information
					The completion of Truste Sharing milestones will e environment of informatio and interoperability capa	establish an on standardization abilities that fosters
					innovation and improves data exchange.	s internal and external



Less VA's Future Environment of API Architecture





Technology and Platform Services: Platform Management

Current Environment

Drivers

Future Environment

Enterprise platform management services are currently a decentralized paradox within VA, as there are various solutions throughout the **Portfolios and Product Lines**. There are several hosting and provisioning methodologies, numerous SharePoint farms, and several instances of CRM solutions within VA.

The current environment of VA's IT enterprise is a significant factor in the need to migrate to the Cloud as part of enterprise platform services. VA's large and complex IT infrastructure, with an exponentially growing volume of hardware and storage, is inconsistent with a modern Cloud computing strategy. Additionally, the current process for VA customers to adopt SaaS is time consuming and expensive.

To improve its delivery of Cloud services, OIT has begun to refine its **Cloud strategy** to incorporate recent realignments and reassignments within its organization. In April 2018, VA established VAEC as well as the **Enterprise Cloud Solutions Office** (ECSO) as key enablers of the overall VA Cloud Strategy.

To support VA modernization efforts, enterprise platform management services are a critical element that will enable the VA Portfolios to align with the VA EA Vision and Strategy and support DevSecOps. Platform Management Product Line goals support VA Strategic Goal #4 by leveraging Cloud technologies, Infrastructure as a Service, and PaaS.

Furthermore, *Cloud technology is a key* enabler for IT modernization and is one of the cornerstones of the PMA. Accordingly, the Report to the President on IT Modernization recommends bringing the government to the Cloud and vice versa. VA's migration to the Cloud responds to this report's recommendations as well as the federal Cloud strategy.

In 2010. OMB established a Cloud First policy as part of the Federal Cloud Computing Strategy, which the Department has adopted through VA Directive 6517. In accordance with recent updates to this strategy, VA's ECSO will supplement its Cloud First efforts with the Cloud Smart policy.

Hosting and Provisioning (Integrated Architecture Multi-Cloud Strategies): Implementing a VA Enterprise Container Solution, a PaaS product that enables development teams to accelerate development, deploy software efficiently, and operate in a scalable manner

Transformative Initiatives

- CRM (Microsoft Dynamics): SaaS architecture that primarily allows VA call center employees to closely interact and manage interactions with customers and Veterans
- VA Enterprise Cloud (VAEC): A multi-vendor Cloud solution for the development and deployment of VA Cloud applications that simplifies the development of new applications in the Cloud and accelerates migration of existing applications to the Cloud
- **Enhancements and Strategy:** Implementing an enterprise Cloud strategy to deliver more responsive, cost-effective IT services and promote adoption of the Cloud Smart policy, highcapacity Cloud contracts, and public/community Cloud criteria

The Platform Management Product Line will provide Infrastructure as Code, containerization, CI/CD, and automated testing as means to support DevSecOps.

Additionally, VA will migrate to VAEC, allowing OIT to better leverage the *latest technologies* to more rapidly deliver improved services to Veterans. The migration will significantly reduce IT operating costs and enable VA to shift from a capital expenditure model to an operating expenditure model.

VAEC will be a business enabler that provides Veterans, VA employees, and business partners with on-demand services and applications that are accessible on user-preferred devices. It will form the foundation of an interoperable, scalable, and secure Cloud computing environment that can adapt to evolving business needs.

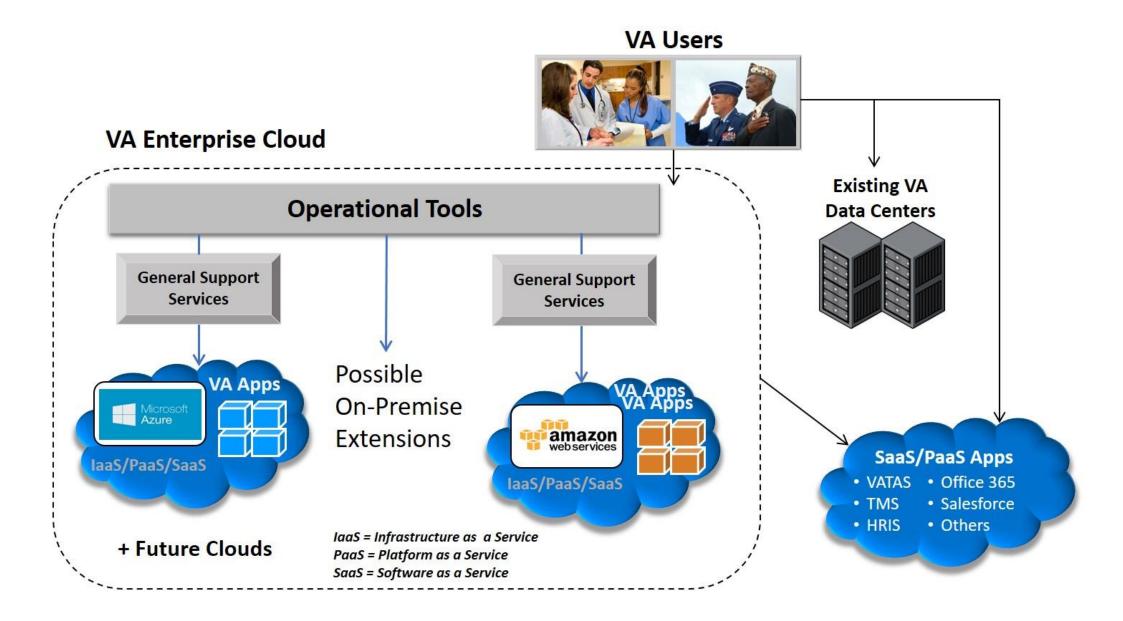
VAEC's future environment will leverage Cloud Service Provider native services and other tools, and **VA will achieve** highly reliable and available infrastructure to develop and host Cloud services and applications across the Department.



FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Q1: Complete Hosting & Provisioning (H&P) Container Cloud Pak Pilot	Q1: Review new VAEC computing technology and revise VAEC Strategy	Q1: Review new Cloud technology and evolve VAEC computing strategy	Q1: Review new Cloud technology and evolve VAEC Computing Strategy	Q1: Review new Cloud technology and evolve VAEC computing strategy	Q1: Adapt VAEC to new strategic technology trends	Q1: Adapt VAEC to new strategic technology trends
Q1: Improve VAEC service performance	Q2: Automate VAEC security services	Q3: Improve enterprise Cloud strategy and policies	Q3: Improve enterprise Cloud strategy and policies	Q3: Improve enterprise Cloud strategy and policies	Q2: Evolve strategy and direction based on evolution of VAEC & IT technologies	Q2: Evolve strategy and direction based on evolution of VAEC & IT technologies
Q2: Establish SharePoint (SP) team, review migration plan, and initiate process improvement	Q2: Automate VAEC scanning and testing services	Q3: Complete VAEC automation services in key areas	Q4: Improve VAEC service performance and efficiency	Q3: Ex pand VAEC to incorporate new Cloud service technology	Q4: Create MSD 365 SaaS CRM SNOW service catalog and automate forms	Q4: Create MSD 365 SaaS CRM SNOW service catalog and automate forms
Q2: Draft MSD 365 CRM transition artifacts, business processes, and implement platform monitoring	Q3: Automate Cloud software development lifecycle	Q4: Improve VAEC service performance and efficiency	Q4: Execute VAEC Migration Plan	Q4: Improve VAEC service performance and efficiency	Q4: Create and implement strategy for innovation and improvements in MSD 365	Q4: Create and implement strategy for innovation and improvements in MSD 365 SaaS Platform
Q2: Select H&P platform to utilize for proof of concept	Q4: Deploy VA-Platform One across VAEC and data centers & implement VA-Platform One Cost Model	Q4: Execute VAEC Migration Plan	Q4: Monitor Azure FedRAMP ATO and hosted customer applications using MSD 365 SaaS	Q4: Complete migration of 350 applications to VAEC	Q4: Plan activities to achieve PLM maturity level 2–5 to align MSD 365 with ACOE strategy and goals	Q4: Plan activities to achieve PLM maturity level 2–5 to align MSD 365 with ACOE strategy and goals
Q2: Continue to review Cloud redundant services used at the local level for enterprise solutions	Q4: Deploy Service catalog item via ServiceNow portal	Q4: Create MSD365 SaaS CRM SNOW service catalog & automate forms	Q4: Plan and develop activities to complete HR required tasks	Q4: Stabilize existing data center operation with VAEC	Q4: Remediate MSD 365 SaaS findings in the CRM AoA Study	Q4: Remediate MSD 365 SaaS findings in the CRM AoA Study
Q3: Update SP strategy and implement process improvements	Q4: Develop and implement VA- Platform One ConOps to support application modemization	Q4: Create and implement strategy for innovation and improvements in MSD 365 SaaS Platform	Q4: Create MSD 365 SaaS CRM SNOW service catalog and automate forms	Q4: Ex ecute VAEC Migration Plan	Q4: Increase MSD 365 SaaS customer base	Q4: Increase MSD 365 SaaS customer base
Q3: Transition MSD 365 CRM platform management responsibility to the Platform Management Product Line	Q4: Conduct container ex periments, proof of concept, & market research	Q4: Plan activities to achieve PLM maturity level 2–5 to align MSD 365 with ACOE strategy and goals	C4: Create and implement strategy for innovation and improvements in MSD 365 SaaS Platform	Q4: Monitor Azure FedRAMP ATO and hosted customer applications using MSD 365 SaaS	Q4: Perform process improvement and optimization	Q4: Perform process improvement and optimization
Q3: Conduct H&P proof of concepts for VA enterprise container solution	Q4: Implement Application Analyzer to support application modemization	Q4: Remediate MSD 365 SaaS findings in CRM AoA Study	C4: Plan activities to achieve PLM maturity level 2–5 to align MSD 365 with ACOE strategy and goals	Q4: Create MSD 365 SaaS CRM SNOW service catalog and automate forms	VISION: The completion of Plat milestones will provide	
Q4: Establish SP project to recover hardware cost with Azure farm	Q4: Develop Service Offerings for Hosting in the IO Franchise Fund	Q4: Improve Data Management Interface processes and procedures	Q4: Remediate MSD 365 SaaS findings in the CRM AoA Study	Q4: Create and implement strategy for innovation and improvements in MSD 365 SaaS Platform	deliver automated testi support DevSecOps, a migrate to VAEC in an	ng as means to and enable VA to
Q4: Manage all new MSD 365 CRM customer requests for licenses and platform provisioning	Q4: Establish SP guidelines and best practices & provide SP Platform Solutioning services	Q4: Develop Service Offerings for Hosting in the IO Franchise Fund	Q4: Develop Service Offerings for Hosting in the IO Franchise Fund	Q4: Plan activities to achieve PLM maturity level 2–5 to align MSD 365 with ACOE strategy and goals	latest technologies and improved services to \	d more rapidly deliver
Q4: Migrate VistA instances and disaster recovery capabilities to VAEC	Q4: Develop SPOL Training pathways & enhance the SPOL Support Model	Q4: Perform process improvement and optimization	Q4: Engage stakeholders for Hosting Services	Q4: Remediate MSD 365 SaaS findings in the CRM AoA Study		



LE VAEC Future Environment Architecture



OIT Transformation

OIT recognizes that in order to enable VA modernization, the organization must transform. By doing so, OIT will help VA become an organization that Veterans and VA employees want to interact with and rely on. The following are foundational elements of OIT Transformation.

Product Line Management

Product Line Management (PLM) is an operating model that aligns IT resources and funding to business capabilities to deliver specific business outcomes. OIT leadership established the PLM Working Group to evaluate the benefits of adopting a PLM model. Following the success of a Digital Experience Pilot, OIT is adopting PLM across the organization. OIT's current PLM Operating Model includes five Portfolios, 27 Product Lines, and 700+ products (systems/applications).



Enterprise Data Management

Enterprise Data Management (EDM) is the holistic development and execution of data management plans that deliver the value of VA data. VA's data is a fundamental resource of the Department, and the effective management of its data is integral to the delivery of services to Veterans. OIT will institutionalize EDM as part of governance through the provision of the Enterprise Logical Data Model and Data Governance Council approved data standards.



Technology Business Management

Technology Business Management (TBM) is a value-management framework for IT organizations predicated on transparency of cost, consumption, and performance. The TBM framework characteristics are based on continuous improvement and positioning for value. Following TBM's success in the commercial space, OMB recommended that the public sector adopt the TBM framework across the Federal Government in 2017. By FY 2022, VA will meet the OMB mandate to fully report all IT Towers and Cost Pools in the TBM taxonomy, and OIT will operate at TBM Maturity Level 5 (Business Driver).



Strategic Sourcing

OIT established the Office of Strategic Sourcing (OSS) to provide more accountable IT product and service procurement for VA. OSS's work encompasses the entire sourcing lifecycle and is transforming OIT to be a customer of choice to suppliers, thereby attracting the best talent and the price. OSS enables OIT to maximize value by optimizing the stewardship of tax dollars and will implement a category management capability that enables VA to deliver more value and savings from its IT acquisitions.



DevSecOps

Development Security Operations (DevSecOps) is a product team level development paradigm that implements an industry-standard "continuous delivery pipeline," producing frequent and regular product releases. DevSecOps integrates requirements definition, development, security testing, operations, compliance, and the customer into one product team. These product teams, using DevSecOps practices, are the basic organization unit for Product Lines and manage releases, and production operations.



IT Governance

IT governance provides critical support for the enterprise-level IT governance that enables efficient investment/portfolio management necessary for transformation and continuous process improvement across VA. It also supports implementation of regulations and guidance from internal and external government-wide advisory bodies. IT governance focuses on effective and efficient decision making and will help support planning as a part of the PPBE process, UFR validation, FITARA compliance, and TBM implementation.



Next Steps

- Publish the comprehensive FY 2020–2026 VA Enterprise Roadmap aligned to VA's IT Strategy
- Publish the FY 2020–2026 VA Enterprise Roadmap Executive Summary
- Introduce the Enterprise Roadmap to OIT Governance Boards to review the major components and drive meaningful and strategic IT management governance decisions
- Inform long-term IT planning, prioritization activities, and unfunded requirement (UFR) review
- Collaborate with OSS and IT Resource Management (ITRM) to gather data on reinvestment strategies, cost savings, and cost avoidance
- Define and establish scope for target VA Enterprise, Portfolio, and Product Architecture
- Update the Enterprise Roadmap on an annual basis
- Identify programmatic, portfolio, integration, and schedule overrun risks by working with QPR's
 Risk Management Division

Acronyms and Abbreviations (A–GC)

Acronym	Description
	.gov Cybersecurity Architecture Review
.govCAR	Program
21st Century	
IDEA	21st Century Integrated Digital Experience Act
ACOE	Agile Center of Excellence
	Advanced Computational and Translational
ACTIV	Initiatives for Veterans
ADS	Authoritative Data Source
Al	Artificial Intelligence
ALS	Adobe Learning Suite
	Veterans Appeals Improvement and
AMA	Modernization Act of 2017
AMAS	Automated Monument Application System
Amazon S3	Amazon Simple Storage Service
AMS	Appraisal Management Service
AoA	Analysis of Alternatives
API	Application Programming Interface
AQS	Analytical Quality System
ARMS	Appeals Resource Management System
ARS	Attachment Retrieval System
ATA	Anywhere to Anywhere
	Advancing Telehealth through Local Access
ATLAS	Stations
AVM	Automated Valuation Model
AWS	Amazon Web Services
B2C	Bill to Collect
BEP	Benefits Enterprise Platform
BF2E	Budget Formulation to Execution
BFFS	Beneficiary Fiduciary Field System
BGS	Benefits Gateway Services
BIA	Benefits Integration and Administration
ВІР	Benefits Integration Platform

Acronym	Description
DIDI C	Beneficiary Identification and Record Locator
BIRLS	Subsystem
Board	Board of Veterans' Appeals
BOSS	Burial Operation Support System
BOSS-E	Burial Operation Support System – Enterprise
C&P	Compensation and Pension
CAP	Cross-Agency Priority
CARMA	Caregiver Record Management Application
ССМ	Case and Correspondence Management
CCN	Community Care Network
ССР	Community Care Program
CCRA	Community Care Referral and Authorization
CCRS	Community Care Reimbursement System
CD2	Critical Decision 2
CDM	Continuous Diagnostics and Mitigation
CDS	Courseware Delivery System
CDW	Corporate Data Warehouse
	Office of Construction & Facilities
CFM	Management
CHANADION	Computational Health Analytics for Medical
CHAMPION	Precision to Improve Outcomes Now Clinical Data Repository/Health Data
CHDR	Repository
	Continuous Integration and Continuous
CI/CD	Delivery
CIO	Chief Information Officer
CLE	Continuing Legal Education
CommCare C3	Community Care Clinical Contact Center
ConOps	Concept of Operations
COTS	Commercial Off-the-Shelf
COVERS	Control of Veterans Records System
CP4	Checkpoint 4
CPAC	Consolidated Patient Account Center

Acronym	Description
CPRS	Computerized Patient Record System
CRM	Customer Relationship Management
CS	Compensation Service
CSS	Centralized Scheduling Solution
СТІ	Computer-Telephony Integration
CWINRS	Corporate Waco-Indianapolis-Newark- Roanoke-Seattle
СХ	Customer Experience
CxDW	Customer Experience Data Warehouse
DAS	Data Access Services
DATA Act	Digital Accountability and Transparency Act of 2014
DBS	Daily Burial Schedule
DCCI	Data Center Consolidation Initiative
DCOI	Data Center Optimization Initiative
DD/EFT	Direct Deposit/Electronic Funds Transfer
DevSecOps	Development Security Operations
DHS	U.S. Department of Homeland Security
DLP	Data Loss Prevention
DMLSS	Defense Medical Logistics Standard Support
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
EA	Enterprise Architecture
EAAS	Emergency Alerting and Accountability System
ECCM	Enterprise Contact Center Modernization
eCMS	Electronic Contract Management System
ECSC	Enterprise Call Session Control
ECSO	Enterprise Cloud Solutions Office
ECSP	Enterprise Cybersecurity Program
ECSS	Enterprise Cybersecurity Strategy
EDI	Electronic Data Interchange
EDIS	Emergency Department Integration Software

Acronym	Description
EDM	Enterprise Data Management
EDU	Education Service
EHR	Electronic Health Record
EHRM	Electronic Health Record Modernization
еНХ	eHealth Exchange
EIN	Electronic Insurance
ePACS	Physical Access Control System
EPRS	Enterprise Program Reporting System
ERM	Enterprise Risk Management
ES	Enrollment System
ESM	Enrollment System Modernization
ESS	Enterprise Shared Service
e-VA	Electronic Virtual Assistant
EVVE	Electronic Verification of Vital Events
FAR	Federal Acquisition Regulation
FAS	Finance and Accounting System
E00D40	Florida/Caribbean Consolidated Patient
FCCPAC	Account Center Foundations for Evidence-Based Policymaking
FEBP Act	Act of 2018
	Federal Risk and Authorization Management
FedRAMP	Program
FEMA	Federal Emergency Management Agency
FFLR	Full File Loan Review
FHIR	Fast Healthcare Interoperability Resources
FISMA	Federal Information Security Management Act Federal Information Technology Acquisition
FITARA	Reform Act
	Financial Management Business
FMBT	Transformation
FMS	Financial Management System
FOC	Full Operating Capability
FOM	Functional Organizational Manual

Acronyms and Abbreviations (GE-TE)

Acronym	Description
FP	First Party
FRCP	Federal Rules of Civil Procedure
FSC	Financial Services Center
FSSP	Federal Shared Service Provider
FTI	Federal Tax Information
FY	Fiscal Year
GAO	U.S. Government Accountability Office
GAR	Gravesite Assessment Reporting
GCLAWS	General Counsel Legal Automation Workload System
GenISIS	Genomic Information System for Integrated Science
GIS	Geographic Information System
GOE	General Operating Expense
GOTS	Government Off-The-Shelf
GS	General Schedule
GSA	U.S. General Services Administration
Н&Р	Hosting & Provisioning
HCBRM	Human Capital Business Reference Model
HEC	Health Eligibility Center
HIE	Health Information Exchange
НІРАА	Health Insurance Portability and Accountability Act
HR	Human Resources
HR&A	Office of Human Resources and Administration
HR-PAS	Human Resources Payroll & Accounting Services
HRC	Health Resource Center
HRIS	Human Resources Information System
HRIT	Human Resources Information Technology
HSRM	HealthShare Referral Manager
IAM	Identity and Access Management

Acronym	Description
IC3	Interagency Care Coordination Committee
IDT	Interactive Design Template
iFAMS	Integrated Financial and Acquisition Management System
IGA	Identity Governance and Administration
IHP	Informal Hearing Presentation
INS	Insurance Service
IOC	Initial Operating Capability
loT	Internet of Things
IPS	Insurance Payment System
IRB	Institutional Review Board
IRM	Information Resources Management
IRS	Internal Revenue Service
ISCM	Information Security Continuous Monitoring
IST	Integrated System Testing
IT	Information Technology
ITRM	IT Resource Management
IVR	Interactive Voice Response
JALFHCC	Captain James A. Lovell Federal Health Care Center
JSRRC	Joint Services Records Research Center
KM	Knowledge Management
LAN	Local Area Network
LGY	Loan Guaranty Service
LIP	Licensed Independent Practitioners
LIPAS	Life Insurance Policy Administration Solution
LoB	Line of Business
МАСРАС	Mid-Atlantic Consolidated Patient Account Center
MADSS	Management and Decision Support System
MAP-D	Modern Award Processing Development
MBMS	Memorial Benefits Management System

Acronym	Description
МНА	Mental Health Assistant
	Maintaining Internal Systems and
MISSSION	Strengthening Integrated Outside Networks
ML	Machine Learning
MPI	Master Person Index
MPI-e	Master Person Index – Enhanced
	Mid-South Consolidated Patient Account
MSCPAC	Center
MSD 365	Microsoft Dynamics 365
MSDS	Military Service Data Sharing
MSS	Manager Self-Service
MVI	Master Veteran Index
MVP	Million Veteran Program
MYP	Multi-Year Plan
NARA	National Archives and Records Administration
NCA	National Cemetery Administration
	North Central Consolidated Patient Account
NCCPAC	Center
NCC	National Call Centers
NECPAC	North-East Consolidated Patient Account
	Center
	Next Generation Personal Identity Verification
NGL	Nationwide Gravesite Locator
NPL	Non-Performing Loan
NWQ	National Work Queue
OALC	Office of Acquisition, Logistics, and Construction
OCLA	Office of Congressional and Legislative Affairs
OCM	Organizational Change Management
ODM	Operational Decision Manager
OGC	Office of the General Counsel
OIG	Office of Inspector General
OIS	Office of Information Security

Acronym	Description
OIT	Office of Information and Technology
ОМВ	Office of Management and Budget
	Office of the National Coordinator for Health
ONC	Information Technology
OPIA	Office of Public and Intergovernmental Affairs
ORD	Office of Research and Development
ORM	Office of Resolution Management
	Office of Operations, Security, and
OSP	Preparedness
OSS	Office of Strategic Sourcing
OTH	Other-Than-Honorable
P&F	Pension and Fiduciary Service
P2P	Procure to Pay
PaaS	Platform as a Service
PAID	Personnel and Accounting Integrated Data
	Patient Advocate Tracking System -
PATS-R	Replacement
PCGL	Personal Computer Generated Letters
PCMM	Primary Care Management Module
PDMP	Prescription Drug Monitoring Program
PIV	Personal Identity Verification
PLM	Product Line Management
PMA	President's Management Agenda
	Planning, Programming, Budgeting, and
PPBE	Execution
PPMS	Provider Profile Management System
QPR	Office of Quality, Performance, and Risk
R2R	Record to Report
RA	Reimbursable Agreement
	Recovery Engagement And Coordination for
REACH VET	Health – Veterans Enhanced Treatment
REE	Registration Eligibility and Enrollment
RLC	Regional Loan Center

Acronyms and Abbreviations (TI-X)

Acronym	Description
RLS	Regional Local Service
RPA	Robotic Process Automation
RTM	Requirements Traceability Matrix
SaaS	Software as a Service
SCLA	SecVA/Congressional/Legal Affairs
SCMC	Supply Chain Master Catalog
SDVI	Service-Disabled Veterans Life Insurance
SDVOSB	Service-Disabled Veteran-Owned Business
SecVA	Secretary of Veterans Affairs
SIO	Systems Integration Office
SP	SharePoint
SPOL	SharePoint Online
SQUARES	Status Query and Response Exchange System
sso	Single Sign-On
SSOe	Single Sign-On External
SSOi	Single Sign-On Internal
CLAUDAG	Enterprise Safety/Workers' Compensation
SWIMS	Information Management System
TAC	Technology Acquisition Center
ТВМ	Technology Business Management Office of Transition and Economic
TED	Development
TIC	Trusted Internet Connection
TK	Toolkit
TMP	Telehealth Management Platform
UAT	User Acceptance Testing
UD-O	Unified Desktop Optimization
UFR	Unfunded Requirement
UoC	University of Chicago
USDA	U.S. Department of Agriculture
VA	U.S. Department of Veteran Affairs
VACOLS	Veterans Appeals Control and Locator System

Acronym	Description
VADIR	VA/DoD Identity Repository
VAEC	VA Enterprise Cloud
VALERI	VA Loan Electronic Reporting Interface
	VA Loan Electronic Reporting Interface Re-
VALERI-R	Design
VAM	Voice Access Modernization
VAMC	VA Medical Center
VAOS	VA Online Scheduling
VASS	VA Solid Start
VBA	Veterans Benefits Administration
VBMS	Veterans Benefits Management System
VDIF	Veterans Data Integration and Federation
	Veterans Data Integration and Federation
VDIF-EP	Enterprise Platform
VEMS	Veterans Enterprise Management System
VEO	Veterans Experience Office
VETC A	Veterans E-Health and Telemedicine Support
VETS Act	Act of 2017
VETSNET	Veterans Service Network
VHA	Veterans Health Administration
VICTARS	Veterans Insurance Claims Tracking and Response System
VINCI	VA Informatics and Computing Infrastructure
VIP	Veteran-focused Integration Process
VIS	Veterans Information Solution
VISN	Veterans Integrated Service Network
	Veterans Information Systems and Technology
VistA	Architecture
VLM	Veterans Legacy Memorial
VMLI	Veterans' Mortgage Life Insurance
VOSB	Veteran-Owned Small Business
VPC	Virtual Private Cloud
VPN	Virtual Private Network

Acronym	Description
VR&E	Veteran Readiness and Employment
VRM	Veterans Relationship Management System
VSE	VistA Scheduling Enhancement
VSignals	Veterans Signals
vso	Veterans Service Organization
VVA	Virtual VA
VVC	VA Video Connect
WAN	Wide Area Network
WHHL	White House VA Hotline
WITS	Washington Interagency Telecommunications System
woc	Without Compensation
хАРІ	Experience API